



## DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

List of **Virtual Webinars** conducted from **08-06-2020** to **13-06-2020**

S. NO	Date & Time	Subject	Subject Expert	Topic	Number of Students Attended
1.	08/06/2020 & 11:30 A.M to 12:30 P.M	CSE	Dr. A. R. M. Vani, Associate Professor, TSSPDCL, Hyderabad	Root Locus	121
2.	09/06/2020 & 09:30 A.M to 10:30 A.M	DS	Mrs. Padmavathi Assistant Professor, Govt. Degree College Guntur	Data Structures & its Applications	119
3.	11/06/2020 & 10:30 A.M to 11:30 A.M	ACS	Dr. N. Pushpalatha Associate Professor, Department of ECE, AITS, Tirupati.	Modulation Techniques	112
4.	12/06/2020 & 10:30 A.M to 11:30 A.M	M-IV	Mr. P. Rami Reddy, Assistant Professor of Mathematics, Gudlavalleru Engineering College, Gudlavalleru	Fourier Transforms	114

### **A Report of Virtual Webinar on "Root Locus"**

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a **Virtual Webinar** on "**Root Locus**" on 08-06-2020 from 11:30 A.M to 12:30 A.M for II B.Tech ECE students. **Dr. A. R. M. Vani, Associate Professor, TSSPDCL, Hyderabad** was the resource person. A total of **121** students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person **Dr. A. R. M. Vani, Associate Professor, TSSPDCL, Hyderabad** to the students. Later the resource person enlightened the students on the basics and importance of root locus technique.

She explained that the root locus technique in control system was first introduced in the year 1948 by Evans. In the root locus diagram, we can observe the path of the closed loop poles. Hence, we can identify the nature of the control system. In this technique, we will use an open loop transfer function to know the stability of the closed loop control system.

The Root locus is the locus of the roots of the characteristic equation by varying system gain  $K$  from zero to infinity.

The root locus technique or method is a very handy graphical method for sketching the locus of roots in the s-plane as a parameter is varied. The parameter may be gain, phase, overshoot or any other suitable control parameter. This method has been applied broadly in control engineering design problems. It equips the control engineer with a degree of the sensitivity of roots of the system a disparity in parameter under observation.

She also explained the rules and key points regarding root locus and discussed the procedure to plot root locus for any kind of system.

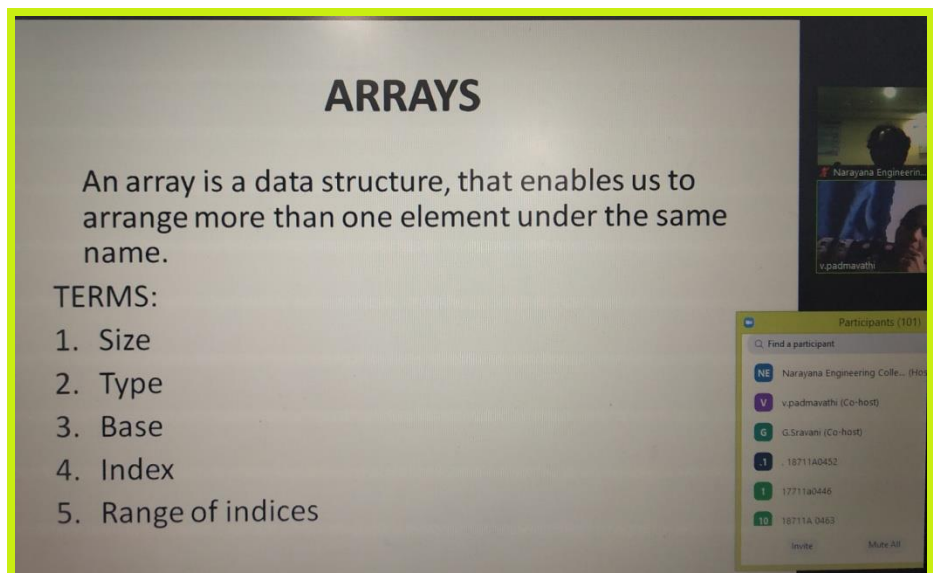
Later at the end of the webinar session, the resource person clarified the queires of students and finally the session was concluded with a vote of thanks.

## **A Report of Virtual Webinar on "Data Structures and its Applications"**

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a **Virtual Webinar** on "**Data Structures and its Applications**" on 09-06-2020 from 09:30 A.M to 10:30 A.M for II B.Tech ECE students. **Mrs. Padmavathi, Assistant Professor, Government Degree College, Guntur** was the resource person. A total of **119** students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Mrs. Padmavathi, Assistant Professor, Government Degree College, Guntur to the students. Later the resource person enlightened the students on the basics of data structures. She explained that data structure is a particular way of organizing data in a computer so that it can be used effectively. The idea is to reduce the space and time complexities of different tasks.

Later she discussed some popular linear data structures such as Array, Linked List, Stack and Queue.



The screenshot shows a presentation slide with the title "ARRAYS" in large, bold, black letters. Below the title, the text reads: "An array is a data structure, that enables us to arrange more than one element under the same name." Underneath this, the word "TERMS:" is followed by a numbered list: 1. Size, 2. Type, 3. Base, 4. Index, 5. Range of indices. On the right side of the slide, there is a small video thumbnail showing a person and a list of participants. The participant list includes "Narayana Engineering Colle...", "v.padmavathi (Co-host)", "G.Sravani (Co-host)", and several other names with their respective IDs.

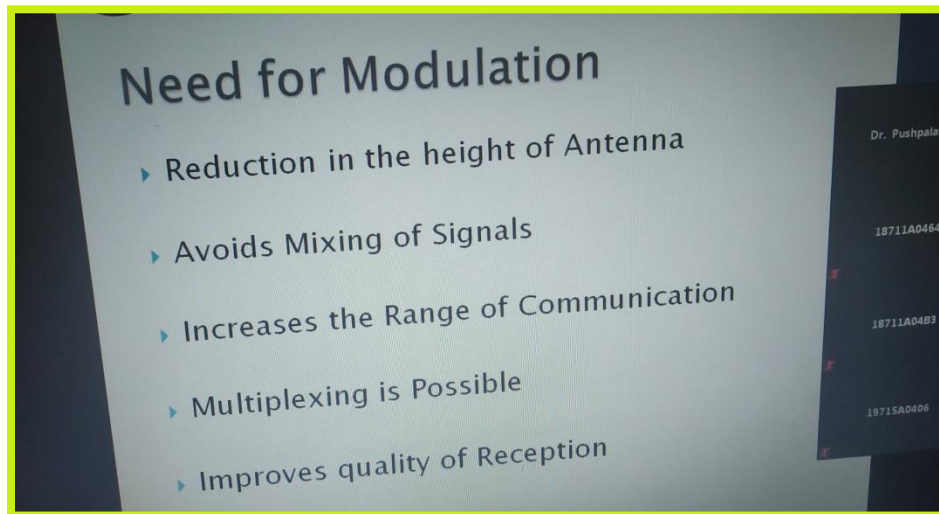
***Figure: Explaining about Arrays***

At the end of the webinar session, the resource person clarified the queires of students and finally the session was concluded with a vote of thanks.

## A Report of Virtual Webinar on "Modulation Techniques"

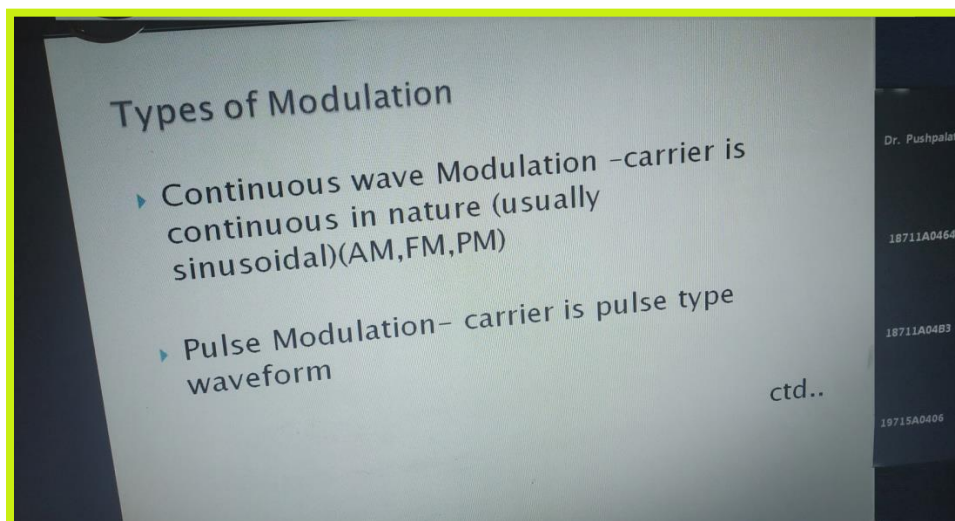
Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a **Virtual Webinar** on "Modulation Techniques" on **11-06-2020** from **10:30 A.M** to **11:30 A.M** for II B.Tech ECE students. **Dr. N. Pushpalatha, Associate Professor, Department of ECE, AITS, Tirupati** was the resource person. A total of **112** students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr. N. Pushpalatha, Associate Professor, Department of ECE, AITS, Tirupati to the students. Later the resource person enlightened the students on the basic definition of modulation and need for modulation.



*Figure: Explaining about need for modulation.*

She explained about the different type of continuous wave and pulse modulation techniques. Later she explained in detail about continuous wave modulation techniques and its applications.



*Figure: Explaining different types of modulation.*

At the end of the webinar session, the resource person clarified the queires of students and finally the session was concluded with a vote of thanks.

## A Report of Virtual Webinar on "Fourier Transforms"

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a **Virtual Webinar** on "**Fourier Transforms**" on 12-06-2020 from 10:30 A.M to 11:30 A.M for III B.Tech ECE students. **Mr. P. Rami Reddy, Assistant Professor of Mathematics, Gudlavalleru Engineering College, Gudlavalleru** was the resource person. A total of **114** students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Mr. P. Rami Reddy, Assistant Professor of Mathematics, Gudlavalleru Engineering College, Gudlavalleru to the students. Later the resource person explained about Fourier transforms and its applications.

**Unit - IV**  
**FOURIER TRANSFORMS**

- **Integral Transforms:** The Integral transform of a function  $f(x)$  is defined as 
$$I\{f(x)\} = \int_{x=a}^b f(x)k(s,x)dx$$
- Where  $k(s,x)$  is called the 'Kernel' of the transform
- The function  $f(x)$  is called the Inverse transform of  $I\{f(x)\}$
- **Laplace Transform:** When  $k(s,x) = e^{-sx}$ ,  $a = 0$ ,  $b = \infty$ 
$$L\{f(x)\} = \int_0^{\infty} f(x)e^{-sx} dx$$

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*Figure: Explaining Integral and Laplace transforms.*

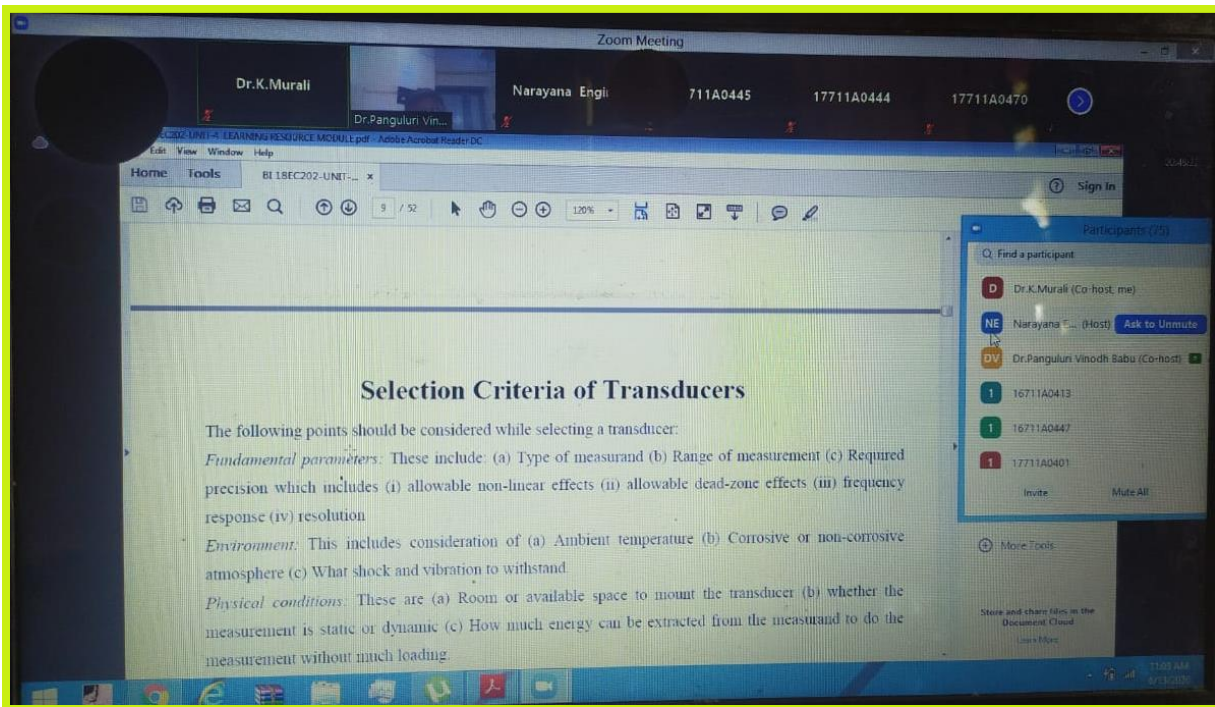
At the end of the webinar session, the resource person clarified the queries of students and finally the session was concluded with a vote of thanks.

## A Report of Virtual Webinar on "Transducers"

Department of Electronics and Communication Engineering, Narayana Engineering College, Nellore organized a **Virtual Webinar** on "**Transducers**" on 13-06-2020 from 10:30 A.M to 11:30 A.M for III B.Tech ECE students. **Dr. P. Vinod Kumar, Associate Professor, Department of EIE, Bapatla Engineering College, Bapatla.** was the resource person. A total of **100** students participated in the virtual webinar.

In this session Dr. K. Murali, Head of the Department addressed the students and introduced the resource person Dr. P. Vinod Kumar, Associate Professor, Department of EIE, Bapatla Engineering College, Bapatla to the students. Later the resource person enlightened the students on the basic definition, types and working principle of transducers.

He explained about various advantages and applications of transducers. Later he concluded that measuring any physical quantity with a electrical transducer is very easy and convenient. The Electrical transducer illustrates the concept of a measurement of any physical quantity, which can be extremely accurate. By means of a transducer, a complex electrical quantity, such as watts, can be measured at a convenient location For remote indication of watts or vars, a transducer can reduce the number of signal wires to be laid between source and indicator from as many as nine to two. Hence it can reduce the cost of a project to a large extent.



*Figure: Explaining the selection criteria of transducers.*

At the end of the webinar session, the resource person clarified the queires of students and finally the session was concluded with a vote of thanks.