K.S.R.M. COLLEGE OF ENGINEERING

(AUTONOMOUS)
Kadapa, Andhra Pradesh, India– 516 003

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Guest Lecture

On

"Metamaterial Microstrip Patch Antennas"

17th June 2021

REPORT

Speaker: Dr. S. Sreenath Kashyap, Vice-Principal, Kommuri Pratap Reddy Institute of Technology Hyderabad.

The importance of the Guest Lecture on "Metamaterial Microstrip Patch Antennas":

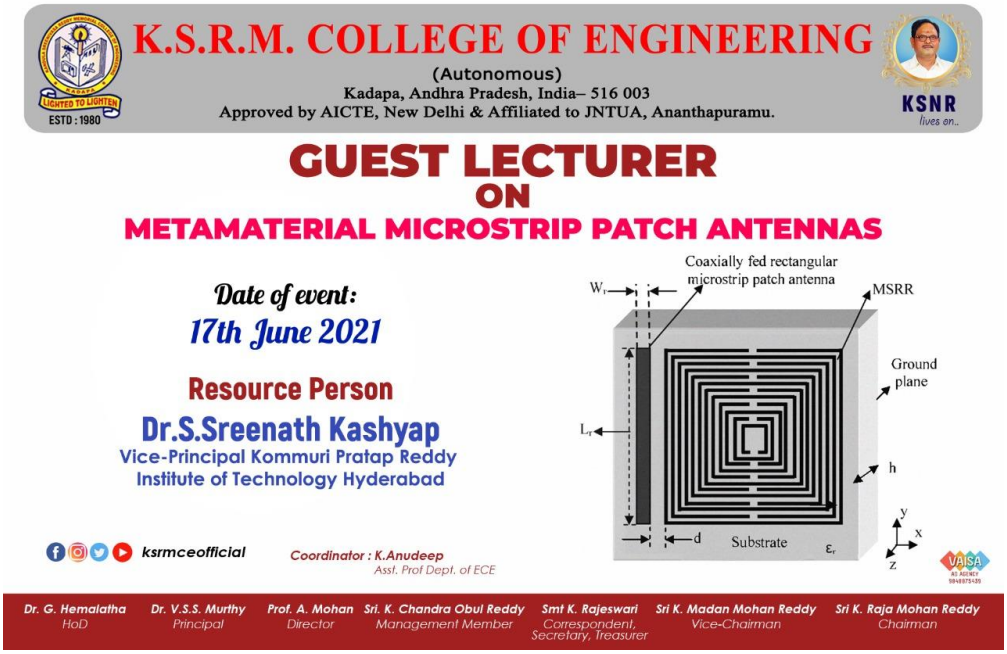
The decade's progress in wireless communication technology is appreciable in the field of science and technology. The key features like compactness, lightweight, enhancement in performance parameters, multi band and multi frequency electromagnetic responses which make microstrip patch antenna a potential candidate for various wireless communication applications. The current trends in research on microstrip patch antennas using electromagnetically coupling to meet requirements like high bandwidth, directivity and gain. The patch antennas inherently have a narrow bandwidth, and bandwidth enhancement is demanded for practical applications. So for the better understanding on "Metamaterial Microstrip Patch Antennas" to the students, the Department of Electronics and Communication Engineering invited Dr. Sreenath Kashyap to delivered a Guest Lecture.

About the Speaker:

Dr. Sreenath Kashyap a researcher and Academic Administrator currently working as Vice-Principal at Kommuri Pratap Reddy Institute of Technology Hyderabad. Dr. kashyap completed PhD in Antennas authored 60+ paper and 4 Books which got published in reputed Journals like IEEE, springer, progress in electromagnetic research etc. He also holds 10

patents for his credit on his research work on Antennas. He also guided 60 UG and 30 PG and 2 PhD scholars till date.

The poster of the Guest Lecture:



Poster of the event: Guest Lecture on "Metamaterial Microstrip Patch Antennas"

The sequence of the Event (Guest Lecture)

The expert lecture was arranged by Department of ELECTRONICS AND COMMUNICATION ENGINEERING for the B.Tech students of the department. The venue was organized thorough virtual mode using Zoom meeting pro application of KSRMCE. The lecture started at 11:00 AM and ended at 12:00 PM. Prof. G. Hemalatha (HoD), Sri K.Anudeep hosted the event and most of the faculty members of Department of Electronics and Communication Engineering along with 109 students of Department were actively participated in the event.

Welcome speech:

Sri. K. Anudeep (Coordinator of the event), Assistant Professor, Dept. of Electronics and Communication Engineering, KSRMCE expressed a very warm welcome to the Prof. G. Hemalatha HoD, faculty and students of the Department. The coordinator introduced the guest of honor to the gathering; the brief of his education, research experience and honors and awards was read for the audience

HoD's speech:

Prof. G. Hemalatha, Head of the department, Electronics and Communication Engineering, addressed the gathering by welcoming the Guest of Honor to the event. She shared the experience of conducting the Guest talk from the past years which can improve their students towards research knowledge. These skills will be very much helpful for getting jobs.

The presentation by the Guest Lecturer:

The features and advantages of microstrip patch antennas have gained attention of various researchers to investigate such types of antennas for various applications. There is a necessity of high gain, directivity and wide bandwidth antennas for avoiding path loss for successfully implementing the wireless communication system.

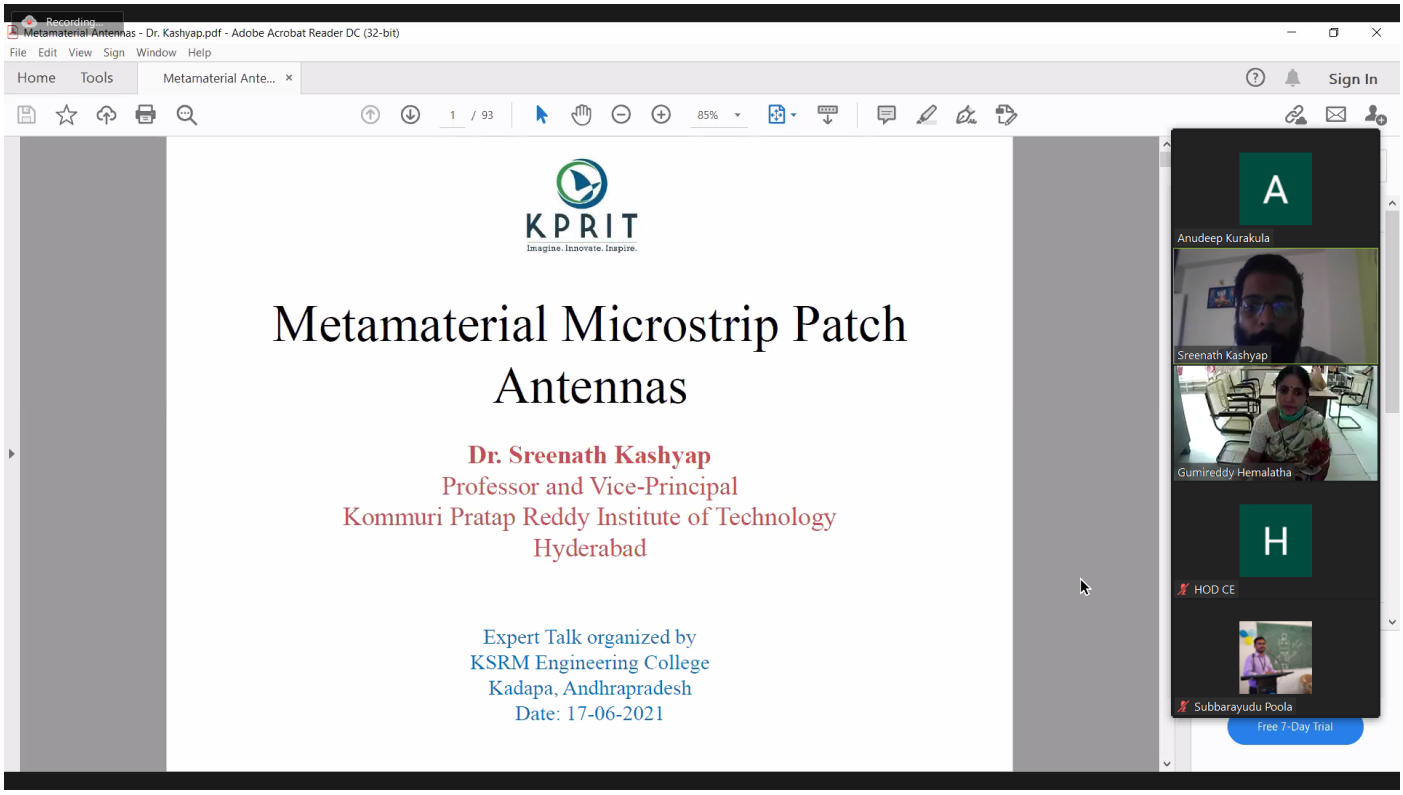
In this context the design of Metamaterials will come into picture and Metamaterial Antennas are artificially engineered materials which can be used in high gain, directive and enhanced bandwidth applications. Today's topic of discussion is regarding the Metamaterial Microstrip Patch Antennas.

HoD's words at end of the Event:

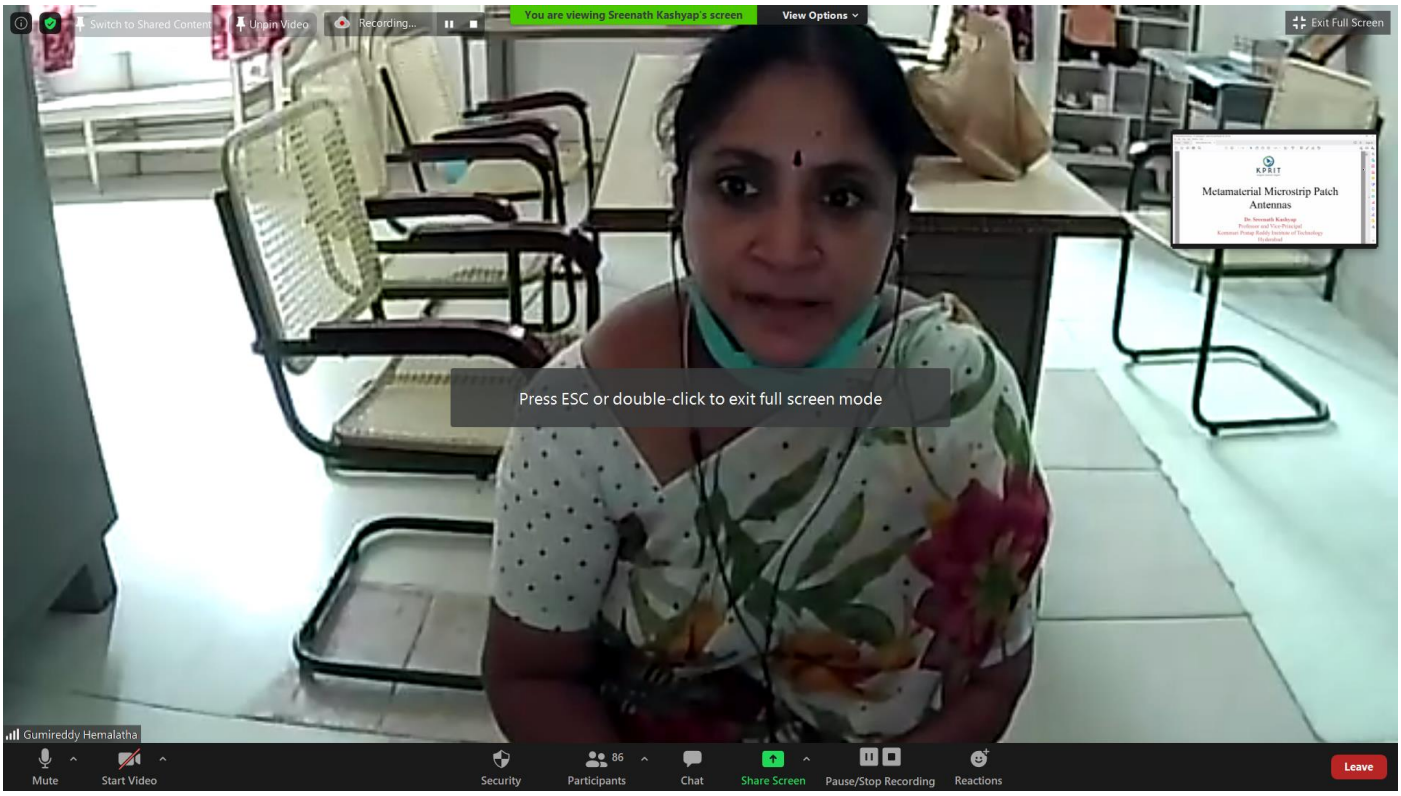
At the end of the lecture, Prof. G. Hemalatha, HoD, Dept. of Electronics and Communication Engineering, KSRMCE expressed his regard to the speaker for sharing his knowledge with the students. HoD encouraged the faculty and students in scope of research in antenna field.

Vote of thanks:

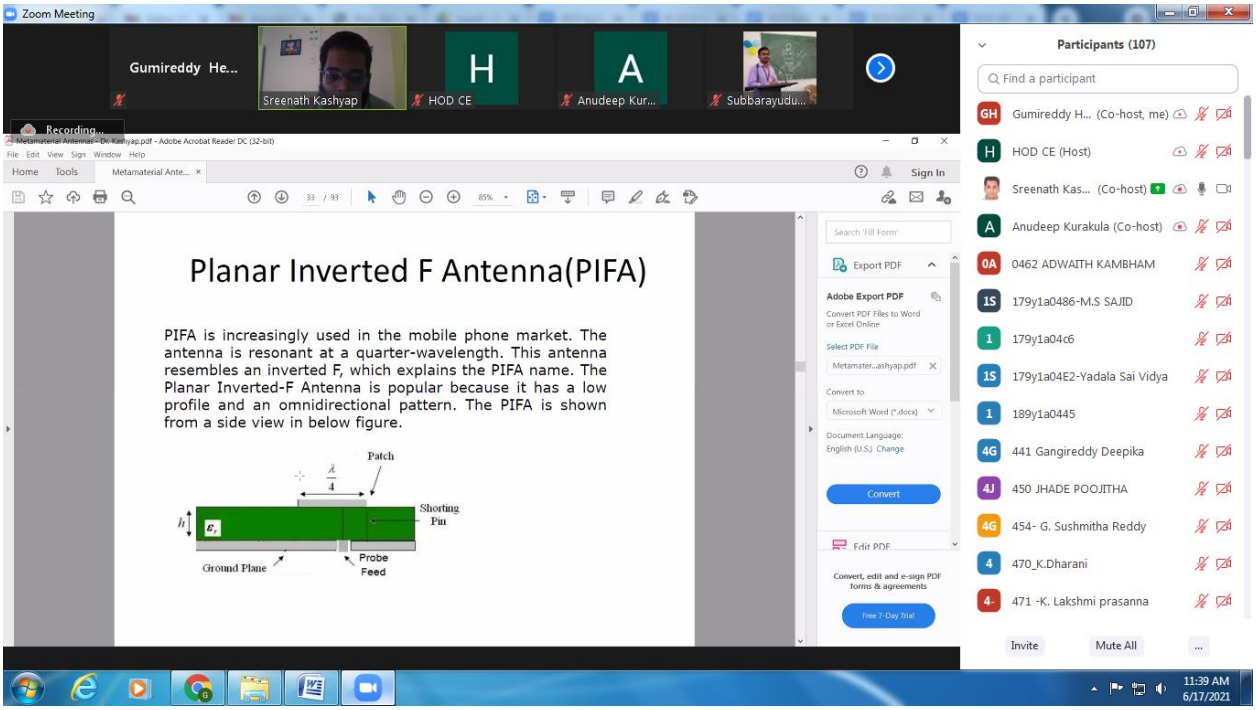
Sri. K.Anudeep (Coordinator of the event) delivered vote of thanks by thanking the students for their participation, faculty members for their active participation and also for HoD for support and encouragement giving to the faculty to organize event in department. Special thanks to Civil Department for providing zoom online platform and organization of KSRMCE for encouragement to conduct such events.



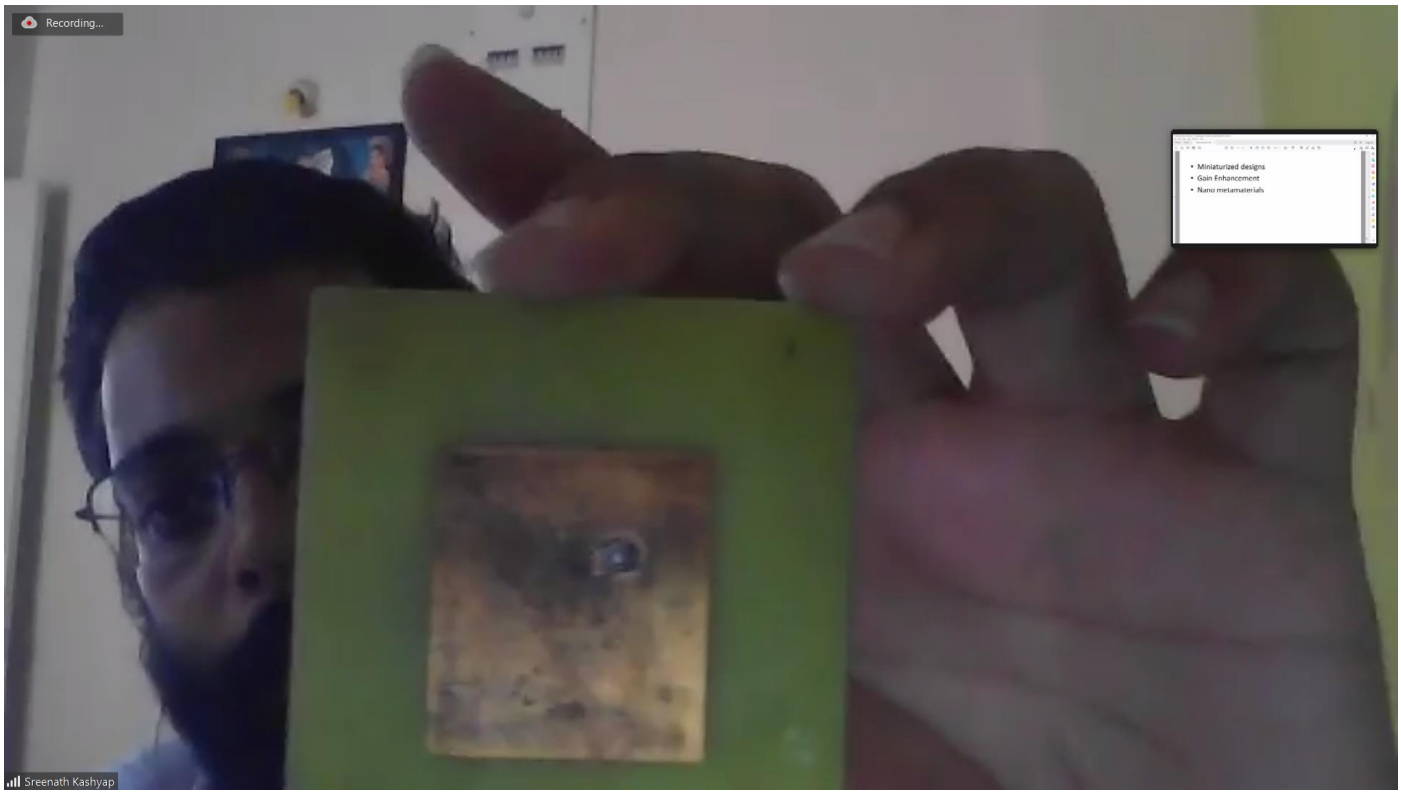
Coordinator of the event introducing the Resource person to the participants



Prof. G. Hemalatha HoD of the ECE Dept. Addressing the gathering



Explaining the planar inverted F Antenna



Practical analysis of designing an antenna

Questionnaire time