



**LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING**

**(AUTONOMOUS)**

**Accredited by NAAC & NBA (CSE, IT, ECE, EEE & ME)**

**Approved by AICTE, New Delhi and Affiliated to JNTUK, Kakinada**

**L.B.Reddy Nagar, Mylavaram-521230, Krishna Dist, Andhra Pradesh, India**

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**DEPARTMENT OF ELECTRONICS & COMMUNICATION  
ENGINEERING**

**Report on the event Online Guest Lecture on “Insights of VLSI Design**

Event Type	:	Guest Lecture
Date / Duration	:	21.01.2021, 2 Hours
Resource Person	:	Dr. Ankesh Jain, Assistant Professor, Department of Electrical Engineering, Indian Institute of Technology, Delhi
Name of Coordinator(s)	:	Dr. G. Srinivasulu & Dr. G. L. N. Murthy
Target Audience	:	B.Tech V <sup>th</sup> Semester students
Total no of Participants:		Faculty Members: 6 Nos. , Students: 193 Nos.
Objective of the event:		To expose the students to the design aspects of Analog to digital converters
Outcome of event	:	Student could be able to get acquainted with the discretization process and numerous constraints involved there off. .

**Description / Report on Event:**

The guest lecture began by introducing the resource person, Dr. Ankesh Jain from IIT, Delhi who is an expert in mixed analog circuit design. This was followed by an introduction to the analog to digital converters by the resource person. ADC (Analog to Digital Converter) is the bridge linking the analog world and the digital world, it can convert the analog signal to the digital signal, and benefits to the storage, processing and transmission of the data. With the development of electronic technique, ADC has much wider application, the requirements of data conversion accuracy is much higher, for example, in high fidelity system, it puts forward the very high requirement to ADC, namely, the resolution of A/D converter must be more than 16-bit.

The number of levels to be retained in the quantization process will in turn rely on the noise margin of the system. The number of levels should be more if the noise margin is less. The current low order and single-bit ADC is limited by the order of modulator and single-bit quantization, which decreases the possibility to get the higher SNR. With the wider application of sigma-delta ADC, the requirements to it become higher. The SNR is the uppermost parameter to measure performance, and it can be improved largely by changing the modulator order, over sampling rate and quantization bits. largely improve the SNR, the attendant problems have emerged, such as the stability and complexity of circuit, and so on . These problems are also serious in low voltage and low power circuits at present. The necessary hardware required for multi bit quantization was also elaborated. The guest lecture concluded thanking Dr. Ankesh Jain for spending his valuable time by accepting the invitation for the guest lecture.

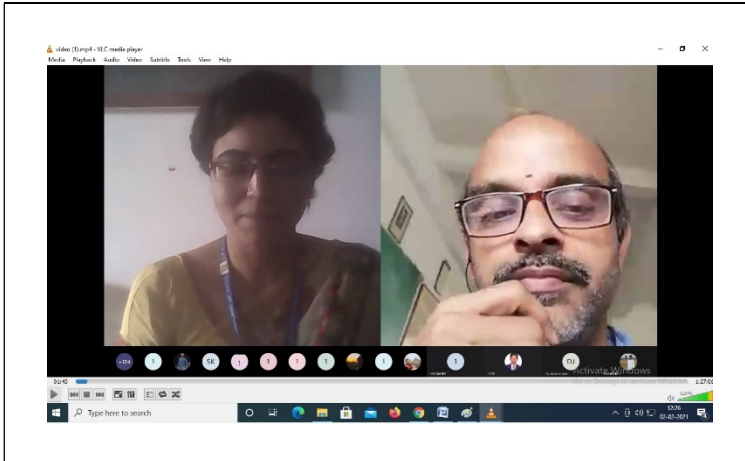
Feedback / Suggestions:

- Conduct such guest lectures on core topics
- Guest lectures on carrier planning
- Increase the time of the guest lecture
- More time for interaction

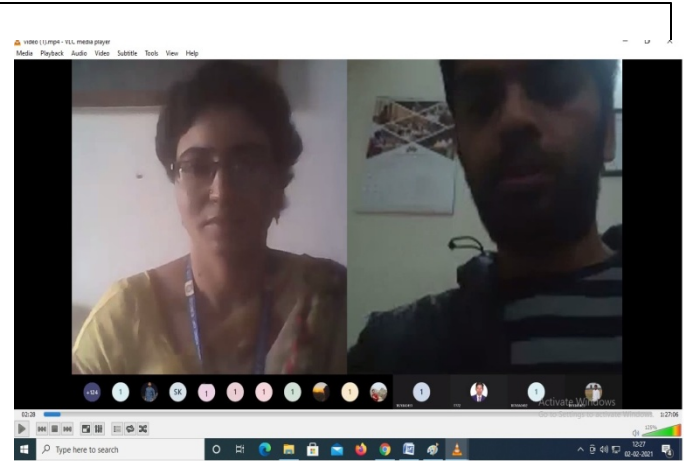
Comments on the feedback:

1. The department will organize the guest lectures or any other events meant for sharing the knowledge in core areas in the upcoming days. As the current semester is about end, they will be planned in next semester.
2. Based on the depth of the content and need definitely time will be increased.
3. The students were asked to interact at the end of session .However, for the upcoming guest lectures more time will be provided for interaction during the lecture.
4. Already alumni interactions have been conducted earlier. However, possibility will be seen for conducting the guest lecture on carrier planning.

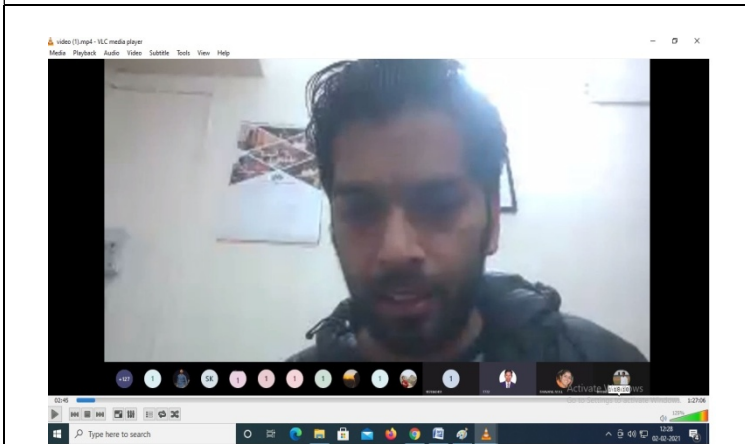
Photographs:



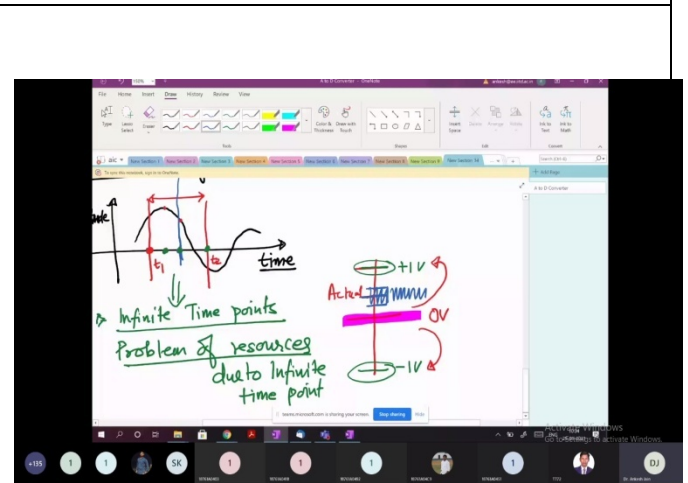
Introducing the resource person by Smt.M.V.L.Bhavani



Addressing by the resource person Dr.Ankesh Jain



Description of Quantization process by the resource person Dr.Ankesh Jain



Concepts of multi bit quantization by the resource person Dr.Ankesh Jain

Signature of the Coordinators

Head of the Department