



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

Department of Electronics and Communication Engineering LNCTS Bhopal

Publicity Report of February 2021

- **International Conference on “Soft computing techniques & Communication Engineering”** is organised by Department of EC of LNCT Group of Colleges on **30-01-2021**. Participants from **LNCT Group** (Faculties, Students) & outside has participated and presented their research paper. Conference had been successfully completed under the guidance of **Dr. Soheb Munir (HOD, EC-LNCTS)** coordinated by **Dr. Aparna Gupta (Professor)**.



LNCTSM
GROUP OF COLLEGES
"WORKING TOWARDS BEING THE BEST"



LNCT GROUP OF COLLEGES, BHOPAL
&
LNCT UNIVERSITY, BHOPAL



Advance Research Educational Society

Organizing
Online Two Days International Conference
on
“SOFT COMPUTING TECHNIQUES & COMMUNICATION ENGINEERING”
In Association with
Advance Research Educational Society (ARES)
On 29th – 30th Jan' 2021



DEPARTMENT OF ELECTRONICS & COMMUNICATION



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

Advance Research Educational Society (ARES):

ARES is a non-profit organization which is actively engaged in organizing the national and international Conferences, Seminars, Workshop, Short Term Training Programs and Faculty Development Programs, in collaboration with various reputed university and institutions.

Thrust Areas of the Conference:



- Artificial Intelligence and Neural Network
- Communications Technologies for Remote Locations
- Organic Electronics and optoelectronics Circuits
- Control and Automation Systems
- E-waste Avoidance and Disposal
- 5G Mobile Technology
- Internet of Things (IoT)
- Advances in Magnetic Field Sensors
- Green Field Energy
- RFID and Sensor Network
- Photonic Crystal Amplifier
- Signal and Image Processing
- Laser Technology and Fiber Sensors
- VLSI Circuit Design and CAD Tools
- Wireless Communication and Smart Antenna



About LNCT:

Lakshmi Narain College of Technology (LNCT) Bhopal, a premier institute of the North Central India region (founded in 1993). All the PG and UG courses of the institute is approved by the AICTE Government of India, recognized by Department of Technical Education, Govt. of M. P., Bhopal and is affiliated to Ropy Gandhi Pradyumnaji Vishwavidyalaya, State Technical University Bhopal. LNCT is one of the first institutes of M. P. to be accredited by NBA for 5 years. LNCT Group is one of the self-financing groups in M. P.

LNCT University is a synonymous with excellence in higher education. A premier institution providing excellent teaching in Engineering, Management, Pharmacy, Medical, Ayurveda, Agriculture sciences, Paramedical, Law and other recurring professional studies. It is among the one of the Top University of central India and has always stood in the forefront in meeting the ever-growing challenges. To meet the ever-growing demand of higher education in India and abroad, LNCT University offers various programs from Diploma, Bachelor, Master's and Doctorate-level programs.

Objectives and Scope of the Conference:

This conference is being organized to provide a unique opportunity for exchanging scientific research and technological achievements accomplished by the technical community. This conference is intended to attract individuals, who are actively engaged both in theoretical and practical aspects of emerging technologies in various areas of Engineering and Applied Sciences. The goal is to provide a platform for useful exchange of scientific research and technological achievements between theoreticians and practitioners and to foster the cross fertilization of ideas.

ONLINE TWO DAYS INTERNATIONAL CONFERENCE

ON
"SOFT COMPUTING TECHNIQUES & COMMUNICATION ENGINEERING"
(29-30 JANUARY, 2021)

Organised by:



Department of Electronics & Communication,
Computer Science & Engineering & Information Technology

LNCT Group of Colleges, Bhopal
And LNCT University, Bhopal
Kalchuri Nagar, Raisen Raod, Bhopal-462021
Website:-www.lnct.ac.in

In association with:





Advance Research Educational Society

Talking: Dr. Soni Chang



The screenshot shows a Zoom meeting interface with a PowerPoint presentation slide displayed. The slide content is as follows:

SHRI MATA VAISHNO DEVI UNIVERSITY, KATRA

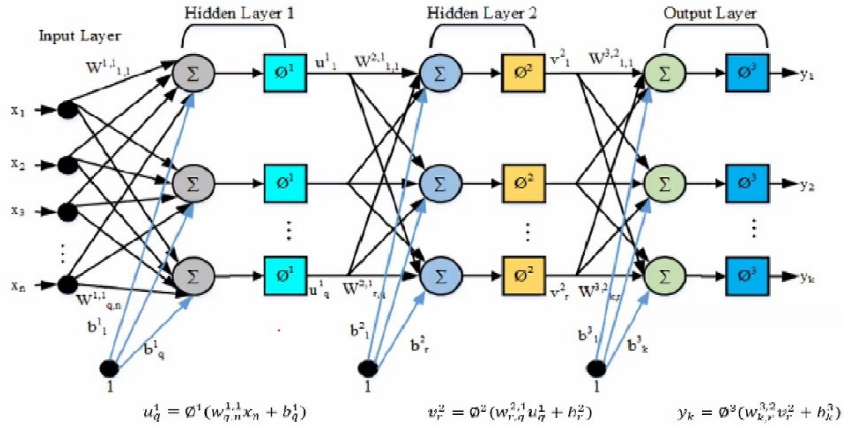
Presentation Talk
on
**Evolutionary Neural Network Approach For
Stock Market Prediction**

Dr. Uday Pratap Singh
Associate Professor
School of Mathematics
SMVDU, Katra

The Zoom interface includes a top toolbar with 'Recording', 'View Options', and 'View' buttons. Below that is the PowerPoint ribbon with 'File', 'Home', 'Insert', 'Design', 'Transitions', 'Animations', 'Slide Show', 'Review', 'View', 'Developer', and 'Help' tabs. The 'Home' tab is active, showing options for 'Clipboard', 'New Slide', 'Section', 'Layout', 'Reset', 'Section', 'Font', 'Paragraph', 'Drawing', 'Shape Fill', 'Shape Outline', 'Shape Effects', 'Find', 'Replace', and 'Select'. The slide thumbnails on the left are numbered 1 through 6. At the bottom, there is a Zoom control bar with 'Unmute', 'Start Video', 'Participants' (41), 'Chat', 'Share Screen', 'Record', 'Reactions', and 'Leave' buttons.



Three-Layered Feed-forward Neural Network (FFNN)



LNCTSM GROUP OF COLLEGES
"WORKING TOWARDS BEING THE BEST"

Online Two Days International Conference
on
"SOFT COMPUTING TECHNIQUES & COMMUNICATION ENGINEERING"
Day 2 Session 1

DEPARTMENT OF ELECTRONICS & COMMUNICATION

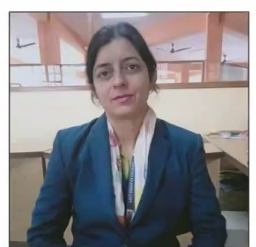
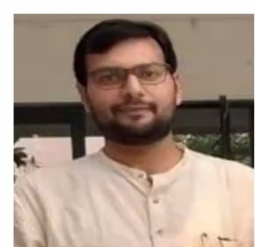

Zoom Meeting interface showing a video call with a participant named Dr. yashpal singh. The interface includes a top bar with participant names (Dr. Soni Changl..., Dr. Abhijeet gup..., VIKAS SWARNK..., M, S, Saiyed Tazen EC...) and a bottom taskbar with system icons (Windows, Edge, File Explorer, Chrome, Zoom, etc.).



Recording

LNCT
SM
GROUP OF COLLEGES
"WORKING TOWARDS BEING THE BEST"


Online Two Days International Conference
on
"SOFT COMPUTING TECHNIQUES & COMMUNICATION ENGINEERING"
Day 2 Session 1



DEPARTMENT OF ELECTRONICS & COMMUNICATION

Zoom Meeting


Zoom Admin 2 Dr. Soni Changl... Dr.Abhijeet gup... VIKAS SWARNK... S Saiyed Tazen EC... Dr. Shrivani S...



Vishant Gahlaut

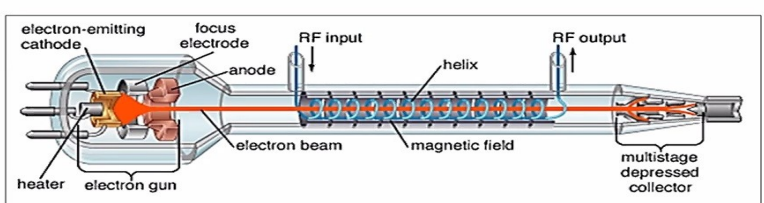
11:54
30-01-2021

Recording



TRAVELLING WAVE TUBE (TWT)

- Used as a high frequency, high gain microwave amplifier in satellite transponders
- Advantages : Wide bandwidth, high linearity and reliability

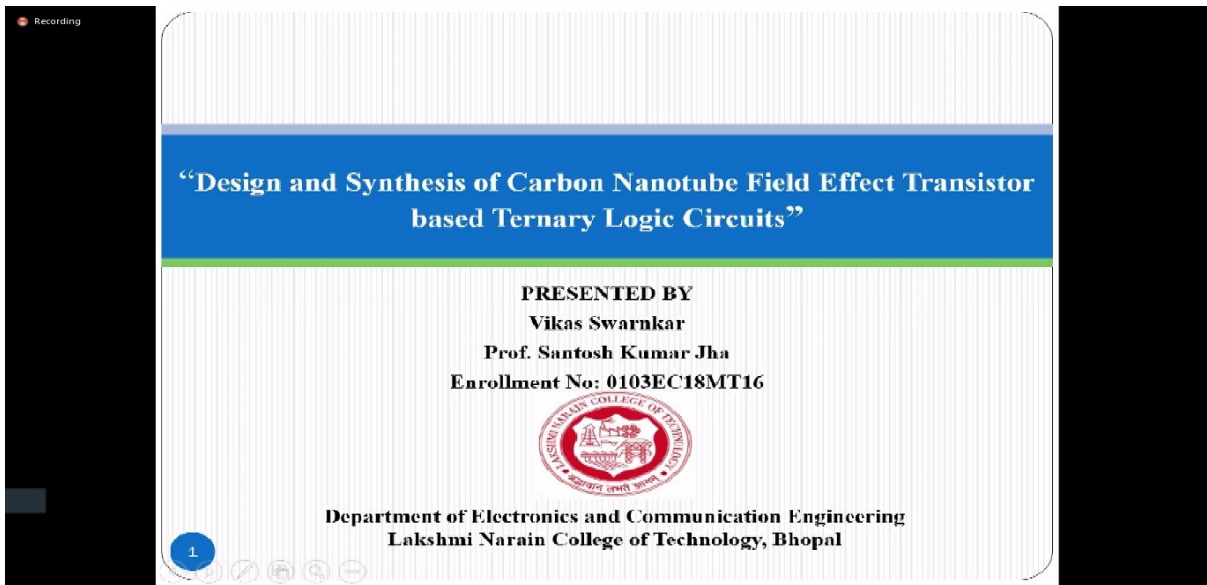
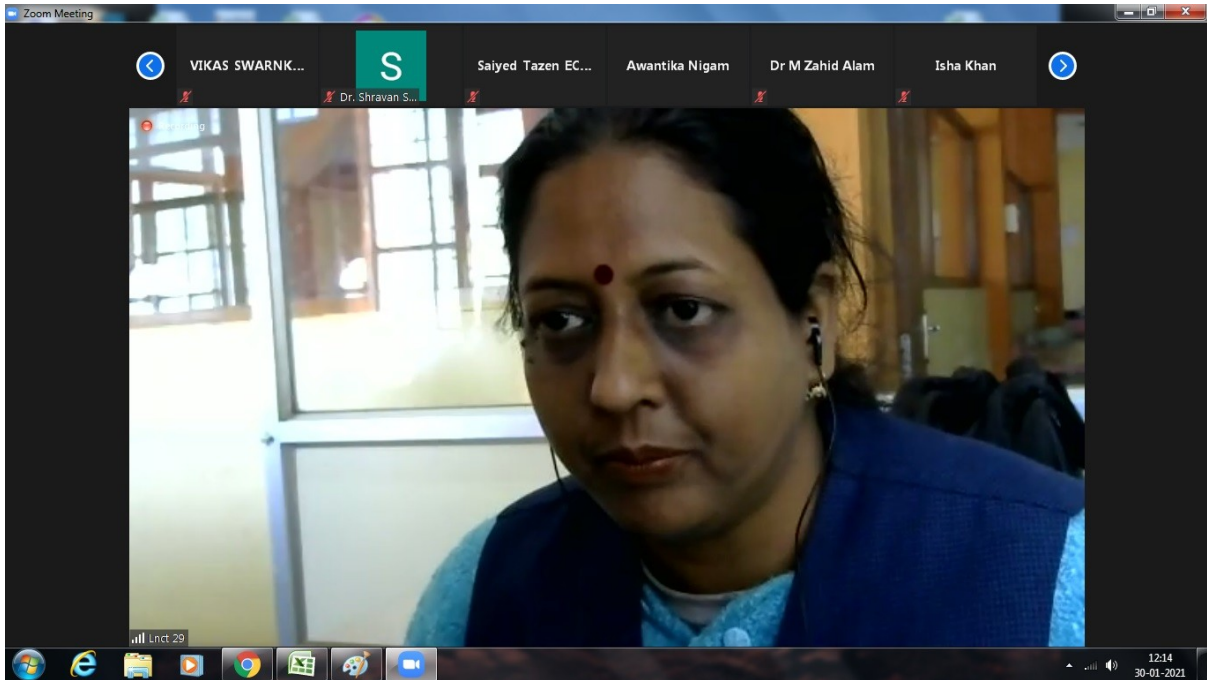


30-01-21



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)





Recording

Presentation Area
“5G: Impact on Pharmaceutical Industry in Indian”

Presented By:
Ms Manju
Ph.D. Research Scholar
Department of Economics
Panjab University Chandigarh

Recording

What is 5G TECHNOLOGY ?

5G technology represents the “Fifth-generation” in a field of wireless communication network. It promises decreased latency, high speeds, and a more associated environment friendly. It is a new global wireless standard after 1G, 2G, 3G, and 4G networks. 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices.

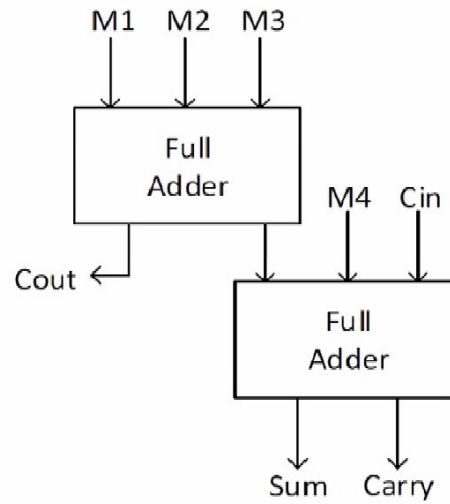
5G wireless technology is meant to deliver higher multi-Gbps peak data speeds, ultra-low latency, more reliability, massive network capacity, increased availability, and a more uniform user experience to more users. Higher performance and improved efficiency empower new user experiences and connects new industries like pharmaceutical industry. The 5G technology is a paradigm shift because it is not only about a network. Instead, it is about an ecosystem of devices and sensors which can be intelligently connected in order to overhaul business and economic policy.



Recording


Design of a Compressor

Output	Number of stages[1]
Cout	3
Sum	4
Carry	5



Recording

INVENTORY MANAGEMENT SYSTEM



Dr. A. K. Malik
Associate Professor,
Department of ASH (Mathematics)
B K Birla Institute of Engineering & Technology,
Pilani (Rajasthan)
Email: ajendermalik@gmail.com

Sanket Choudhary

PRASHANT PUROHIT (E...)

Dr. A. K. Malik

Dr. Bharti Gupta



MEMS Impedance Flow Cytometry: A computation analysis for biological cell separation

Dr. Kulwant Singh (Deputy Director, E-Cell-MUJ)
Associate Professor, Department of ECE,
FlexMEMS Research Centre (FMRC)
Manipal University Jaipur

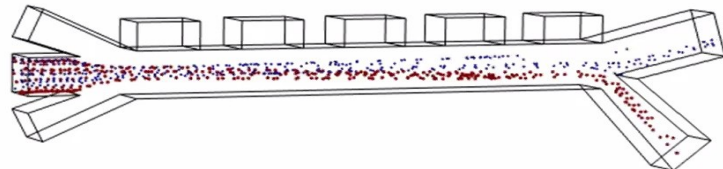
30 January 2021

1

Content



- Role: Need of Microfluidics in Society
- Background: Point of Care Diagnostic Devices
- Overview: Flow Cytometry
- Flow Cytometry Potential
- Functioning:
 - Impedance Flow Cytometry for Cell Detection
 - Impedance Flow Cytometry for Cell Separation
- Bio-cell Levitation
- Flow Cytometry Structure Optimization
- Current Stage of Flow Cytometry
- Future Advancement
- What we are doing at MUJ?



2

Functioning: Impedance Flow Cytometry for Cell Separation



FlexMEMS Research Centre
Manipal University Jaipur

Movement of Cell in Fluid with Influence of Electric Field Dielectrophoresis

CASE-I: $\epsilon_{cell} < \epsilon_{medium}$

DEP force was first explored by researcher H.A. Pohl in 1958 (Pohl, 1958) and can mathematically expressed by equation below



Cell moves away from electrodes (Weaker Electric Field)

$$\langle F_{DEP} \rangle = 2\pi\epsilon_m R^3 \text{Re}[CM^*] \nabla |E_{rms}|^2 \quad (1)$$

Here:

CASE-II $\epsilon_{cell} > \epsilon_{medium}$

R= Radius of the cell/particle

ϵ_m = Medium permittivity

[CM*] = Clausius Mossotti factor

$|E_{rms}|^2$ = RMS value of electric field

ϵ_p^* = Complex permittivity of particle

ϵ_m^* = Medium permittivity of medium



Cell moves towards electrodes (Stronger Electric Field)

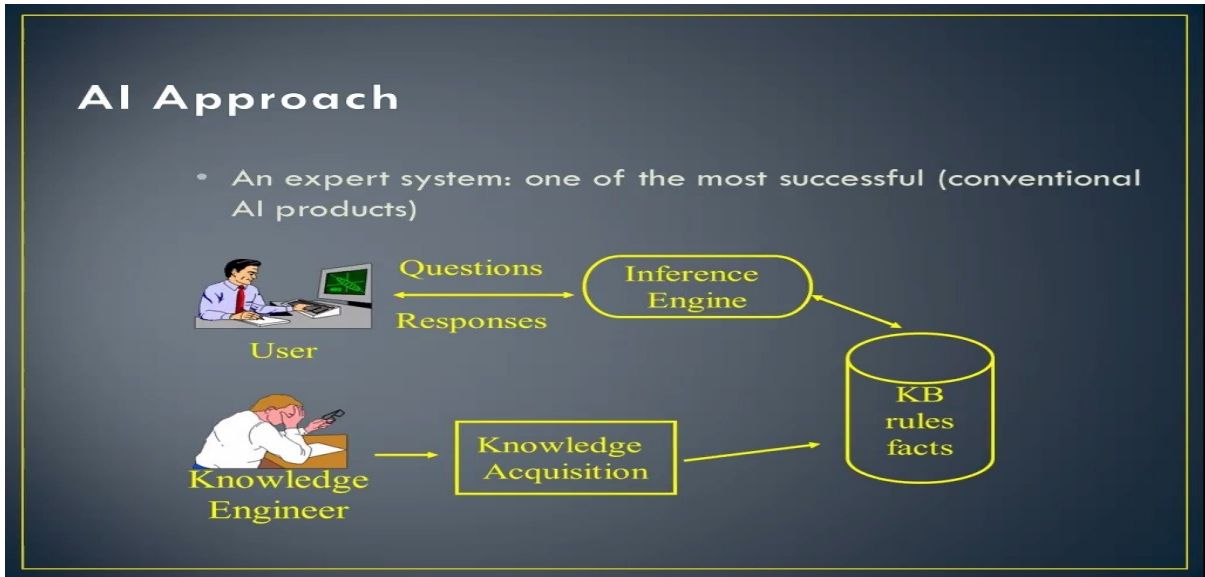
$$CM^* = \left(\frac{\epsilon_p^* - \epsilon_m^*}{\epsilon_p^* + 2\epsilon_m^*} \right)$$

$$\epsilon_p^* = \epsilon_p - i \frac{\sigma_p}{\omega}$$

$$\epsilon_m^* = \epsilon_m - i \frac{\sigma_m}{\omega}$$

What is Soft Computing?

- Soft Computing is a field that currently includes
- Fuzzy Logic
- Neural Networks
- Probabilistic Reasoning (Genetic Algorithms and Evolutionary computing etc.)
- Other related methodologies
- Soft Computing combines knowledge, techniques, and methodologies from the sources above to create intelligent systems.



Introduction: Numerically Control Oscillator

- Generates a discrete-time, discrete-value form of any waveform (sinusoidal signal)
- Tunable digital frequency generator: takes source frequency (f_{ref}) as input and outputs digitized sinusoid signal (f_{out}).
- Frequency can be tuned by a frequency control word register(FCW)

Table.1 :NCO Advantages over other analog methods:

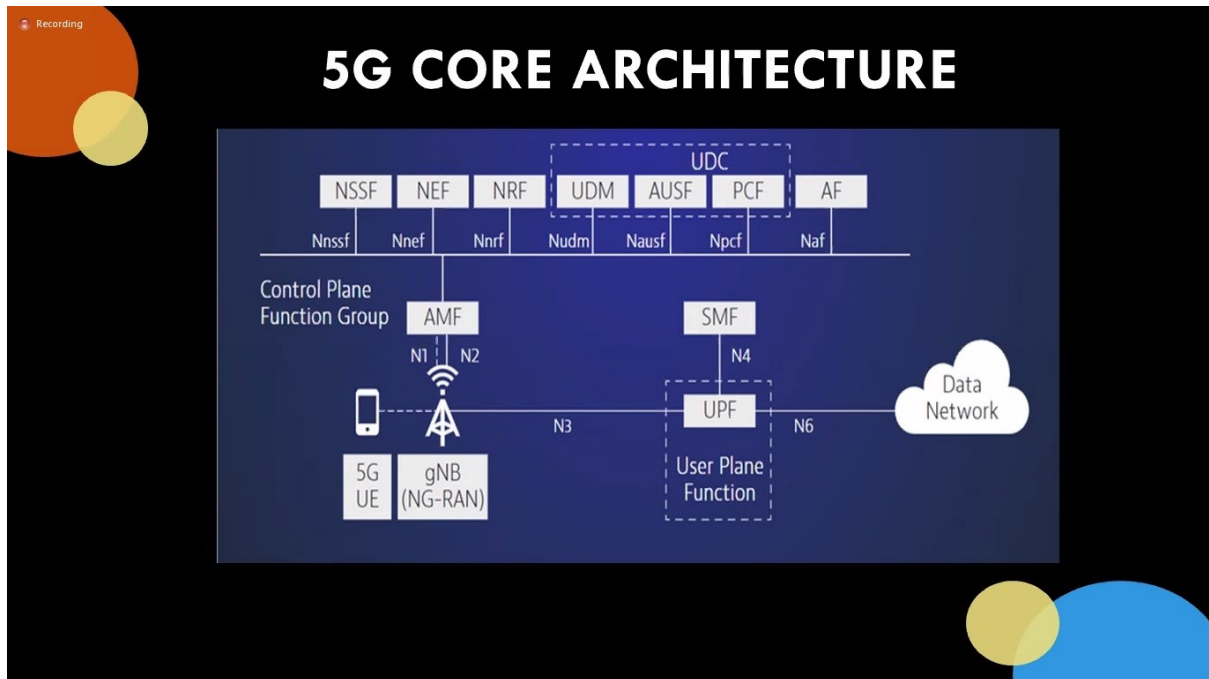
Parameters	Numerical Control Oscillator	Analog Oscillator
1. Size	Small Area	Bulky in nature
2. Power Consumption	Low	High
3. Frequency and Phase Tunability	Precise control is possible	Precise control is not possible

- Applications: 1. Aerospace 2. Mobile communications 3. Satellite Communication 5. Function Generators and 6. Radio Receivers

NCO Design: for Direct Digital Frequency Synthesis (DDFS) & Digital Up Converter/Digital Down Converter

Application	Requirement			
	Frequency Resolution	Resource Utilization (Area)	Conversion Time/ Speed	Design Complexity
1. Direct Digital Frequency Synthesis (DDFS)	Good (Generates frequency in MHz)	Low	Lowest	Simple
2. Digital Up Converter (DUC)/Digital Down Converter (DDC)	Precise (Directly generates frequency in GHz)	Low	Moderate	Moderate

Fig.4: Block Diagram of 1) Direct Digital Frequency Synthesis
2) Digital up converter (DUC) and Digital down converter (DDC)



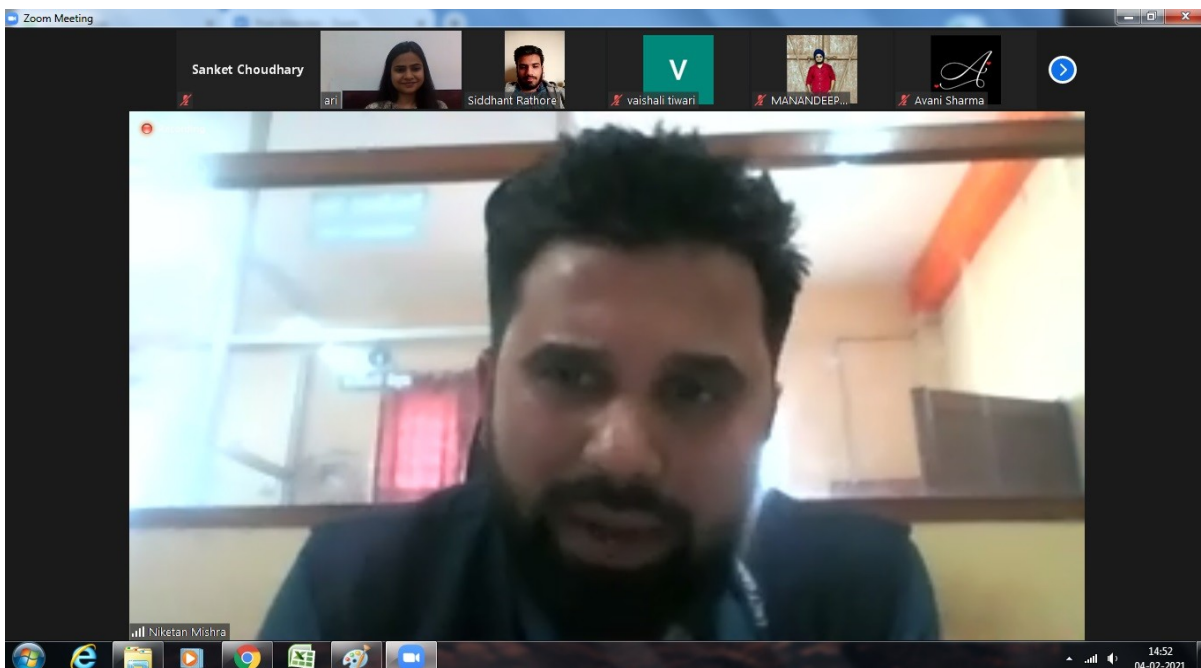


LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

- **EC department LNCTS** has organized an Interaction program for **EC 3rd sem students with placed students (Mr. Siddhant Rathore and Ms. Ariba Mev)** on **04-02-2021 from 2:00 to 3:00 PM**. These placed students have shared their experiences during process of selection under various levels such as how to make resume, how to improve soft skills. Placed students also have satisfied all queries of upcoming aspirants to be placed for the campus placement. The session had been successfully completed under the guidance of **Dr. SohebMunir (HOD, EC-LNCTS)** coordinated by **Prof. Niketan Mishra (Assistant Professor)**.

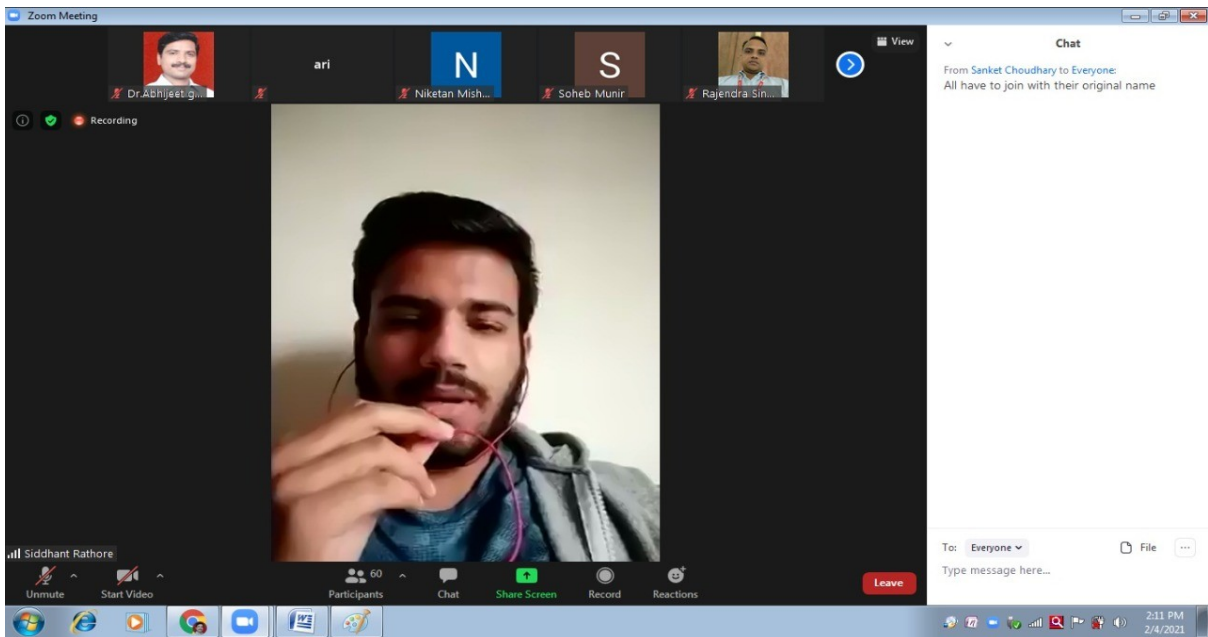
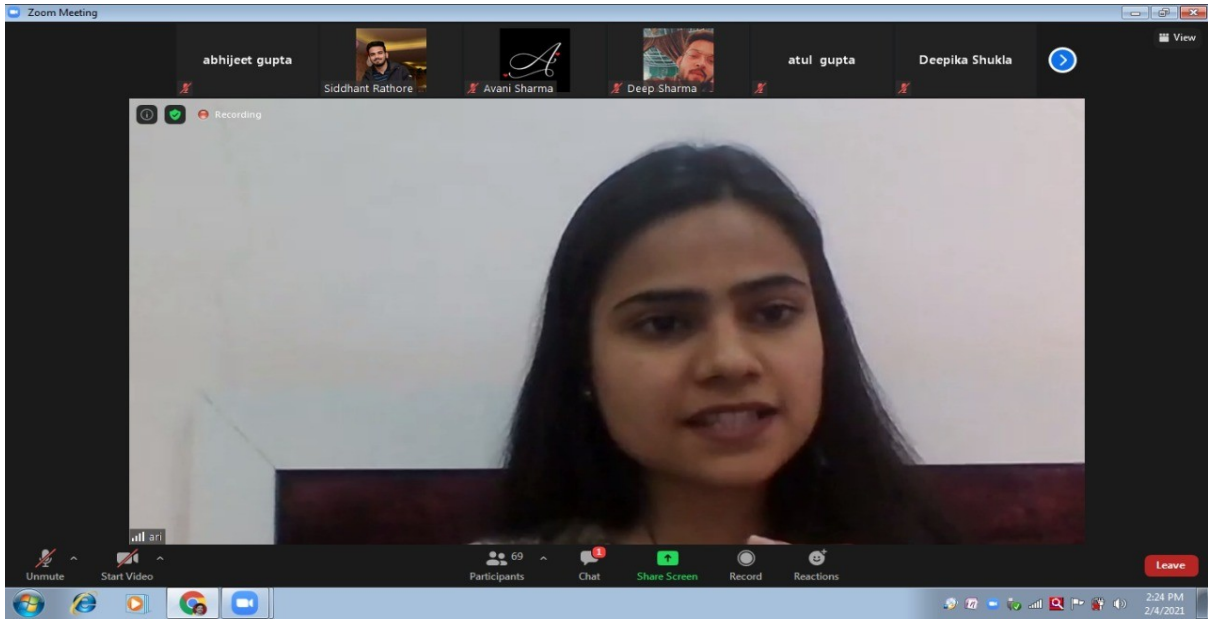
ISTE CHAPTER
Lakshmi Narain College Of Technology & Science
Department Of Electronics & Communication
ONLINE
INTERACTIVE SESSION WITH PLACED STUDENTS
04.02.2021
2:00 P. M - 3.00 P. M
Meeting ID: 937 3686 1686
Password: CM0ZsQ
Tnp co-ordinator: Prof.Niketan Mishra





LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)





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Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

Zoom Meeting

Recording

View

Chat

From Sanket Choudhary to Everyone: 02:00 PM
All have to join with their original name

To: Everyone

Type message here...

2:05 PM
2/4/2021



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

- **EC department LNCTS** has organized an Interaction program for **EC 3rd sem students with placed students (Ms. Karthika Raj, Mr. Md. Taqui Siddiqui, Mr. Shashank Acharya and Mr. Satyam Shashank)** on **04-02-2021** from **1:00 to 2:00PM**. These placed students have shared their experiences during process of selection under various levels such as how to make resume, how to improve soft skills. Placed students also have satisfied all queries of upcoming aspirants to be placed for the campus placement. The session had been successfully completed under the guidance of **Dr. Soheb Munir (HOD, EC-LNCTS)** coordinated by and **Prof. Ayush Johari (Assistant Professor)**.

The poster features logos for Lakshmi Narain College of Technology & Science, LNCTF Group of Colleges, and Institutions' Innovation Council. The main text reads 'Interactive Session With Placed Students'. It specifies the event is for 'ISTE CHAPTER LNCTS' on '4 Feb' from '1 - 2 PM'. The Zoom ID is '78163894619' and the password is 'SK87Bj'. The coordinators are 'Dr. Soheb Munir' and 'Prof. Ayush Johari'.

The screenshot shows a Zoom meeting in progress. The top bar lists participants: Dr. Bhanu P. Singh, Niketan Mishra, KHushal TaDge, and Abhinav Bhar... The main video feed shows a woman speaking. On the right, a list of 34 participants is visible, including Dr. Bhanu P. Singh (Me), Abhinav Bhargava (Host), Karthika Raj, Aastha Goswami, Akshat Dwivedi, Aman, Amandeep Singh, Ayush nema, Deepesh khare, Devank Khare, Hasmukh Singh, and Himanshi Yadav. The system tray at the bottom shows the time as 13:08 on 04-02-2021.



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

Zoom Meeting
Recording
Shashank Acharya is talking...

Participants (46)

KS	Kumar Satyam	🔇	🔇
MJ	Madhuri Jadon	🔇	🔇
MS	Manjeet SINGH	🔇	🔇
MT	Md. Taqui Siddiqui	🔇	🔇
	Muskan sahu	🔇	🔇
NK	Neha Kumari	🔇	🔇
	Nidhi Singh	🔇	🔇
	Nihal Sinha	🔇	🔇
NM	Niketan Mishra	🔇	🔇
	Pawan Kumar	🔇	🔇
	Priya Raj	🔇	🔇
	Rahul Tiwari	🔇	🔇

13:28
04-02-2021

Zoom Meeting
View

Dr. Bhanu P. Sin...
Abhinav Bhar...
Karthika Raj
Niketan Mishra

Recording

Md. Taqui Siddiqui's network bandwidth is low

Md. Taqui Siddi...

Participants (34)

DB	Dr. Bhanu P. Singh (Me)	🔇	🔇
A	Abhinav Bhargava (Host)	🔇	🔇
MT	Md. Taqui Siddiqui	🔇	🔇
	Aastha Goswami(0176EC191001)	🔇	🔇
A	Akshat Dwivedi	🔇	🔇
A	Aman	🔇	🔇
AS	Amandeep Singh	🔇	🔇
	Anish Shyam modi	🔇	🔇
AN	Ayush nema	🔇	🔇
DK	Deepesh khare 0176EC191022	🔇	🔇
DK	Devank Khare	🔇	🔇
HS	Hasmukh Singh	🔇	🔇

Unmute Start Video Participants Chat Share Screen Record Reactions Leave

13:12
04-02-2021

Zoom Meeting

Recording

Dr. Bhanu P. Sin...
Abhinav Bhar...
Satyam Shasha...
Md. Taqui Siddi...

Shashank Acharya

Participants (46)

DB	Dr. Bhanu P. Singh (Me)	🔇	🔇
A	Abhinav Bhargava (Host)	🔇	🔇
SA	Shashank Acharya	🔇	🔇
	Aastha Goswami(0176EC191001)	🔇	🔇
A	Aman	🔇	🔇
AS	Amandeep Singh	🔇	🔇
	Anish Shyam modi	🔇	🔇
AK	Anjali K Pillai	🔇	🔇
AN	Ayush Nema	🔇	🔇
DK	Deepesh khare 0176EC191022	🔇	🔇
DK	Devank Khare	🔇	🔇
D	Dushyant	🔇	🔇

Unmute Me

13:26
04-02-2021



LAKSHMI NARAIN COLLEGE OF TECHNOLOGY & SCIENCE, BHOPAL

Kalchuri Nagar, Raisen Road, P.O- Kolua, Bhopal - 462022 (M.P)

This screenshot shows a Zoom meeting interface. The main display area features the text "Satyam Shashan..." in large white font on a black background. At the top, a toolbar includes the name "Dr. Bhanu P. Sin...", a large letter "A", and "Md. Taqui Siddl...". A "Recording" indicator is visible in the top left. On the right, a "Participants (46)" list is shown with names and icons. The Windows taskbar at the bottom displays the search bar and system tray with the time 13:26 on 04-02-2021.

This screenshot shows a Zoom meeting interface. The main display area features the text "Karthika Raj" in large white font on a black background. The top toolbar shows "Sakshi gupta", "Ayush Nema", and "Neha Kumari". A "Recording" indicator and "Remove Pin" button are present. The right side shows the "Participants (46)" list. The Windows taskbar at the bottom shows the search bar and system tray with the time 13:27 on 04-02-2021.