

**Guru Gobind Singh College of Engineering and Research Centre,  
Nashik**

**Academic Year 2022-23  
Report on  
Training/Workshop/Expert Session**

<b>Name of Program</b>	FDP
<b>Title of Training/Workshop/Expert Session</b>	<b>3 Days FDP on “OPTIMIZATION TECHNIQUES FOR ENGINEERING APPLICATIONS”</b>
<b>Objective of Program</b>	1.To highlight the advances in optimization techniques and their applications in real life problems of sciences and engineering. 2. To introduce a Meta Heuristic Algorithm. 3. To upgrade the capacities of participants to optimize the problem objectives.
<b>Module of Training &amp; Its Content</b>	research advancements in optimization techniques and its applications.
<b>Target Group</b>	---
<b>Number of Faculty /Students Attended Session</b>	108
<b>Date &amp; Duration of Training</b>	28-3-2023 to 30-03-2023
<b>Name of Expert</b>	Total 8 Experts
<b>Details of Expert</b>	Total 8 Experts
<b>Brief about the Training/Workshop/Expert Session</b>	This FDP is designed to address research advancements in optimization techniques and its applications. An optimization algorithm is a procedure which is executed iteratively by comparing various solutions till an optimum or a satisfactory solution is found. With the advent of computers, optimization has become a part of computer-aided design activities. This workshop is aimed at enriching the skills of faculty and researchers towards utilizing optimization methods for solving various engineering problems for future research.
<b>Program Coordinator Name &amp; Sign</b>	1. Mrs.R.S. More 2. Ms. Shamal Dhamal 3. Mrs.N.J. Bhamare
<b>Head of Department Name &amp; Sign</b>	Dr. Rahul Agrawal

# 1.Photos

The screenshot shows a Google Meet interface during a presentation. The main content is a slide titled "Power System Optimization" by Professor D.P. Kothari. The slide lists his extensive professional background, including roles at THDC Institute of Hydropower Engineering and Technology, VITs, and various international fellowships. The Meet interface includes a top navigation bar with browser tabs, a meeting title "Shamal Dhamal is presenting", a video gallery on the right showing the presenter and other participants, and a bottom control bar with icons for mute, video, chat, and other functions. The system tray at the bottom shows the time as 10:47 AM on 28-03-2023.

Shamal Dhamal is presenting

## Power System Optimization

*By*

### Professor D.P. Kothari

Chairman, Board of Governors, THDC Institute of Hydropower Engineering and Technology, Tehri, Uttarakhand  
Honorary Adjunct Professor, VNIT, Nagpur  
Fellow-INAIE, Fellow-INASc, Fellow-IEEE, Hon. Fellow, ISTE, FIE (India), Fellow-IETE, MCSI  
Former Director General  
J B Group Of Educational Institutions, Hyderabad  
Former DG, RGI, Nagpur  
Emeritus Director general, VITS Indore  
Former VC, VIT Vellore  
Former Director IISc IIT Delhi  
Former Principal VRCE, Nagpur  
Visiting Fellow, R.M.I.T., Melbourne, Australia  
Phone -- 917272723202 Email -- [dpk@vits@gmail.com](mailto:dpk@vits@gmail.com)

10:47 AM | ocb-xrqd-pbi

UT1 Issue Note.xlsx | ACFrogC2ImNWH...pdf

26°C Sunny | 10:47 28-03-2023

1:35

12.0 KB/S LTE 4G+ 34

← About this call

People

Info

Activities



Savita Chitavadi



savita tidke



Sharad Dhamal



Shruti Gour



Swati A Thete



Uphade Snehal



Vaiju Kalkhambkar



vijay kumar



Vijaykumar Patil



Vimal Bodke



Virbha Hule



Vishakha Chavhan



Windows taskbar: You are signed in as student | Google | LMS and ERP Account Login | (2) WhatsApp | Meet - ocb-xrqd-pbi

Browser: meet.google.com/ocb-xrqd-pbi

Meeting: Ankur Rana is presenting

Participants: Ankur Rana, Rahul Agrawal, Mr Sunil More Assi..., Farhat Shaikh, rajni kumari, Rutika More, Vishwesh Deshmukh, 43 others, You

4:28 PM | ocb-xrqd-pbi

Windows taskbar: Final Day wise sch..., Final FDP Informa..., 1366x765, 32°C Mostly cloudy, 16:28 28-03-2023

Windows taskbar: You are signed in as st... | (no subject) - nilima.b... | Meet - ocb-xrqd-... | Optimization Techni... | Optimization Techni... | Access Denied

Browser: meet.google.com/ocb-xrqd-pbi

Meeting: swati gajeshwar is presenting

Participants: Rutika More, 39 others, You

Advanced Optimization Methods

- genetic algorithm (GA), simulated annealing (SA), particle swarm optimization (PSO), ant colony optimization (ACO), and artificial bee colony algorithm (ABC) → artificial intelligence research
- Robust to dynamic changes
- Broad applicability
- Hybridization with other methods
- Ability to solve problems that have no solutions.

These algorithms

11:09 AM | ocb-xrqd-pbi

Windows taskbar: Day-04 30-03-2023.xlsx | Day-03 29-03-2023.xlsx | Show all | 25°C Sunny | 11:09 29-03-2023

3:00 PM

VoLTE 4G

o**c**b-x**r**q**d**-p**b**i



https://meet.google.com/o**c**b-x**r**q**d**-p**b**i?pli=1

You're presenting to everyone

Stop presenting

meet.google.com is sharing your screen. Stop sharing Hide

3:00 PM | o**c**b-x**r**q**d**-p**b**i

Type here to search

34°C

Vikas is presenting



Meeting ID: ocb-xrqd-pbl

Vaiju Kalkhambkar is presenting

### Battery Energy Storage

- The minimum energy charged the battery storage is,
 
$$E_{ch}^{min} = \int_0^T (P_{grid}^{t,min} - P_{load}^t) dt, \quad P_{grid}^{t,min} \geq P_{load}^t \quad (16)$$
- The minimum energy supplied during discharging of the energy storage is,
 
$$E_{dis}^{min} = \int_0^T (P_{load}^t - P_{grid}^{t,max}) dt, \quad P_{load}^t \geq P_{grid}^{t,max} \quad (17)$$

where  $T$  is total time period,  $P_{load}^t$  is the system load at time  $t$ ,  $P_{grid}^{t,min}$  and  $P_{grid}^{t,max}$  represents the minimum and maximum power supplied by all the generators in the power system.

Dipali Bhor can now join this meeting

11:30 AM | ocb-xrqd-pbl

Meeting ID: ocb-xrqd-pbl

atul koshti is presenting

AND-GATE: Four

Let us take  $W1=1, W2=1$

where for  $Y_{in} = W1 \cdot X1 + W2 \cdot X2 = X1 \cdot X2$

Activation of Output neuron:

Rule:  $Y = 1$  if  $Y_{in} \geq 2$   
 $Y = 0$  if  $Y_{in} < 2$

1)  $Y_{in} = 2$   
 2)  $Y_{in} = 1$   
 3)  $Y_{in} = 1$   
 4)  $Y_{in} = 0$

Sarita Choudhury has left the meeting

1:33 PM | ocb-xrqd-pbl

2:01













































86.0 KB/S LTE 4G 64

← About this call

People

Info

Activities

- 
- |   |                         |  |   |   |
|---|-------------------------|--|---|---|
|    | Jayashri Sate           |     |    |    |
|    | Jyoti Rokde             |     |    |    |
|    | Mahadev Chougale        |     |    |    |
|  | Mayuresh Bakshi         |   |  |  |
|  | Rajni Kumari            |   |  |  |
|  | Ritesh Tirole (Present) |   |  |  |
|  | Ritesh Tirole           |  |  |  |
|  | Sachin Tayade           |   |  |  |
|  | Sakthibala Dana         |   |  |  |
|  | Sambhaji Sarpate        |   |  |  |
|  | Samiksha Godalkar       |   |  |  |








4:15




139 KB/S Vo LTE 4G 45


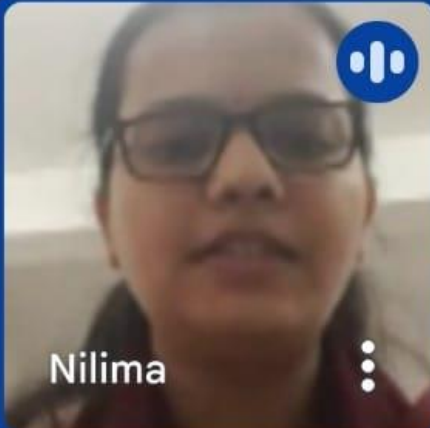



ocb-xrqd-pbi ▶





  
  
Mayuresh 


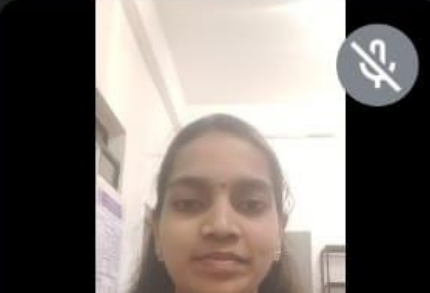

  
  
Rahul 

  
  
Nilima 

  
  
Gcoerc 

  
  
mahadev 

  
  
Rutika 




FDP Information  
Brochure- R1.docx

