B. P. Poddar Institute of Management & Technology
Department of Electrical Engineering

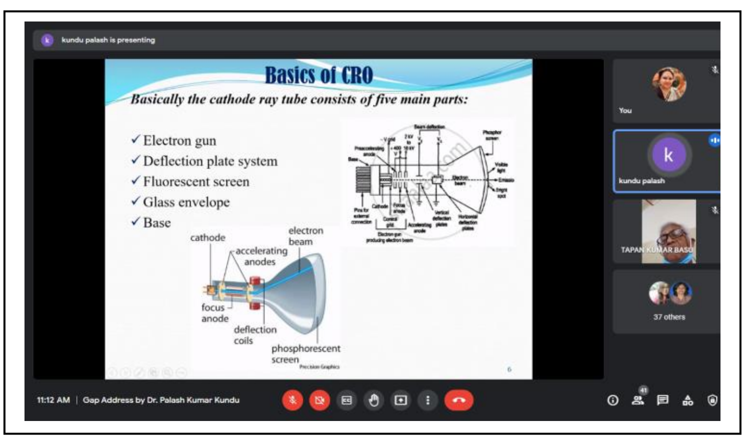
Report of Gap Address Session on "Theory and Operating Principle of Digital Storage Oscilloscope and LCR meter"
Academic Year: 2021-2022

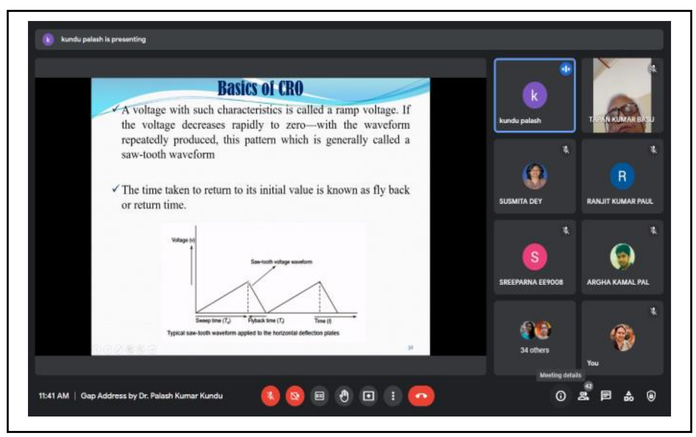
A Gap Address Sessions has been organized by the Department of Electrical Engineering, B. P. Poddar Institute of Management and Technology, Kolkata on "Theory and Operating Principle of Digital Storage Oscilloscope and LCR meter" under our curriculum course Electrical & Electronic Measurement (PC EE-403) on 19.02.2022 through Google Meet platform.

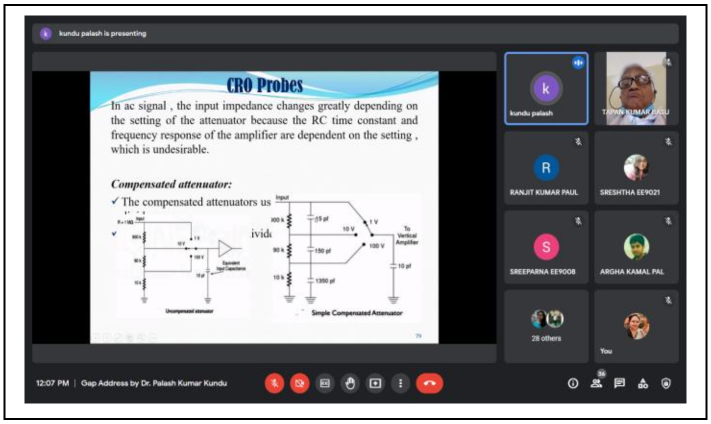
In this session our distinguished speaker was Dr. Palash Kundu, Professor, Department of Electrical Engineering, Jadavpur University. The working and various applications of DSO and LCR meter were well explained by Dr. Kundu during the session. Students from 2nd and 3rd year of Department of Electrical Engineering attended the program. The session was very much interactive and informative session.

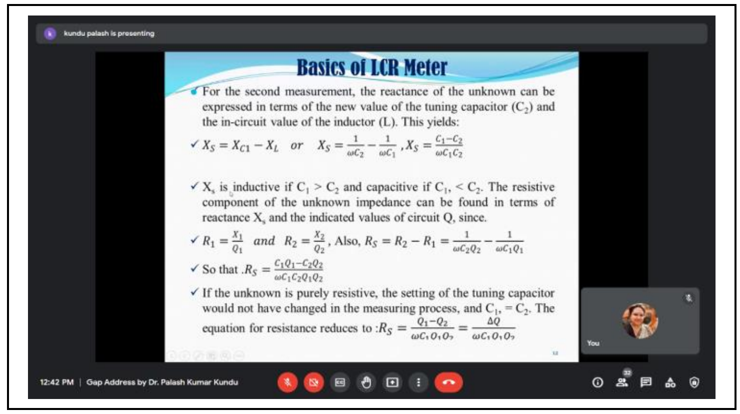
The program was inaugurated by Dr. Nandita Sanyal, HoD, EE. Shrestha Paul, student of 3rd year anchored the entire sessions wonderfully.

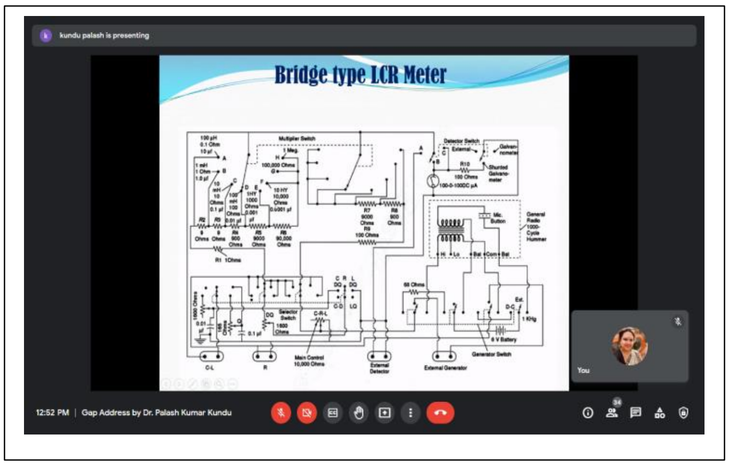
Coordinators Ms. Madhumita Kundu Mondal and Ms. Susmita Dey took the responsibility to organize the events smoothly. Sessions were ended with the vote of thanks given by Dr. Nandita Sanyal and feedback shared by students participants.






kundu palash is presenting
CRO Probes
In ac signal , the input impedance changes greatly depending on the setting of the attenuator because the RC time constant and frequency response of the amplifier are dependent on the setting , which is undesirable.
Compensated attenuator:
The compensated attenuators us
Simple Compensated Attenuator
kundu palash
TAPAN KUMAR BASU
RANJIT KUMAR PAUL
SRESHTHA EE9021
SREEPARNA EE9008
ARGHA KAMAL PAL
28 others
You
12:07 PM | Gap Address by Dr. Palash Kumar Kundu


kundu palash is presenting
Basics of LCR Meter
For the second measurement, the reactance of the unknown can be expressed in terms of the new value of the tuning capacitor (C_2) and the in-circuit value of the inductor (L). This yields:
$X_S = X_{C1} - X_L$ or $X_S = \frac{1}{\omega C_2} - \frac{1}{\omega C_1}$, $X_S = \frac{C_1 - C_2}{\omega C_1 C_2}$
X_s is inductive if $C_1 > C_2$ and capacitive if $C_1 < C_2$. The resistive component of the unknown impedance can be found in terms of reactance X_s and the indicated values of circuit Q, since.
$R_1 = \frac{X_1}{Q_1}$ and $R_2 = \frac{X_2}{Q_2}$, Also, $R_S = R_2 - R_1 = \frac{1}{\omega C_2 Q_2} - \frac{1}{\omega C_1 Q_1}$
So that $R_S = \frac{C_1 Q_1 - C_2 Q_2}{\omega C_1 C_2 Q_1 Q_2}$
If the unknown is purely resistive, the setting of the tuning capacitor would not have changed in the measuring process, and $C_1 = C_2$. The equation for resistance reduces to
You
12:42 PM | Gap Address by Dr. Palash Kumar Kundu


kundu palash is presenting
Bridge type LCR Meter
You
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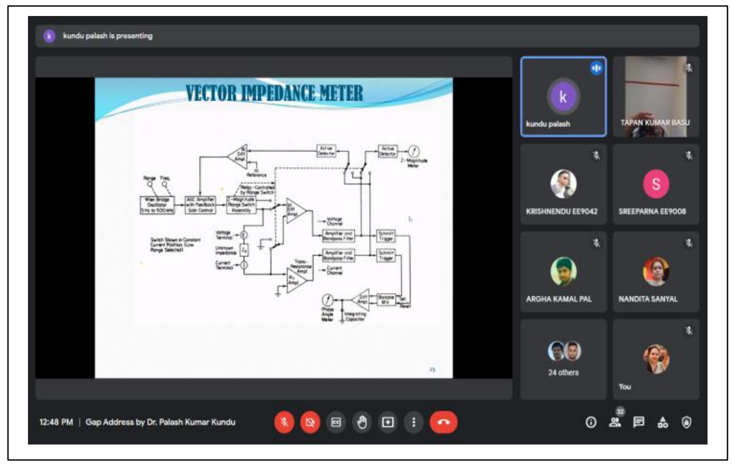
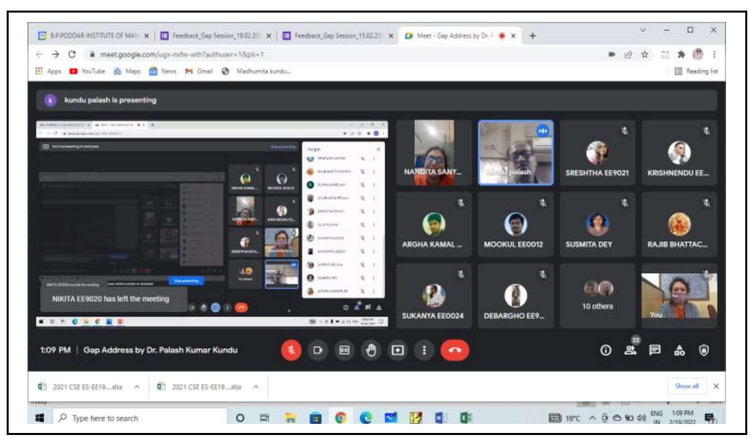

kundu palash is presenting
VECTOR IMPEDANCE METER
kundu palash
TAPAN KUMAR BASU
KRISHNENDU EE9042
SREEPARNA EE9008
ARGHA KAMAL PAL
NANDITA SANYAL
24 others
You
12:48 PM | Gap Address by Dr. Palash Kumar Kundu


kundu palash is presenting
NANDITA SANYAL
SRESHTHA EE9021
KRISHNENDU EE9042
MOOKUL EE0012
SUSMITA DEY
15 others
You
1:09 PM | Gap Address by Dr. Palash Kumar Kundu


kundu palash is presenting
NANDITA SANY...
SRESHTHA EE9021
KRISHNENDU EE...
ARGHA KAMAL ...
MOOKUL EE0012
SUSMITA DEY
RAJIB BHATTAC...
SUKANYA EE0024
DEBARGHO EE9...
10 others
You
NIKITA EE9020 has left the meeting
1:09 PM | Gap Address by Dr. Palash Kumar Kundu
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