



**VELAGAPUDI RAMAKRISHNA
SIDDHARTHA ENGINEERING COLLEGE**
(Sponsored by Siddhartha Academy of General & Technical Education)

An Autonomous Institute
Approved by AICTE, New Delhi
Affiliated to JNTUK, Kakinada
ISO 9001:2015 Certified



Online Faculty Development Program (FDP) on “**Research Methodology and IPR**”

(Under AICTE - Margdarshan Scheme)

13th to 17th September 2021

Organized by IQAC, IIC & Dept of CSE

The Department of CSE in collaboration with IIC & IQAC cell of V R Siddhartha Engineering College has successfully a One Week FDP on “**Research Methodology and IPR**” during **13th – 17th September 2021** under AICTE Margdarshan through online mode. This Faculty Development Program on research methodology aims to inculcate and enhance the abilities of the faculty members to carry out independent research, write successful research projects, and finally to enable them for the technical communication considering national/international journal/conferences. Lectures on fundamental aspect of relevant research topic selection, literature review, systemic approach to break through achievement, planning of research, project proposal writing and research paper writing were delivered by relevant experts in the domain, along with some hands-on practices which will enable participants to grasp the content methodologically. The broader objective of the program is to improve the quality of faculty members which in turn to benefit the students.

IQAC, IIC & Department of CSE
Online Faculty Development Program
“Research Methodology and IPR”
13th – 17th September 2021
(Under AICTE - Margdarshan Scheme)

- The FDP is open to Faculty members (regular/ ad-hoc/ temporary/ guest) from any Indian university/college and registered Ph.D. research scholars of all disciplines.
-  Session Timings : Two sessions are scheduled every day - 10 AM to 11.30 AM and 2 PM to 3.30 PM

Coordinators:
Dr Ch Rupa, Prof, Dept of CSE @ 9848690640;
 Email: drchrupa@vrsiddhartha.ac.in

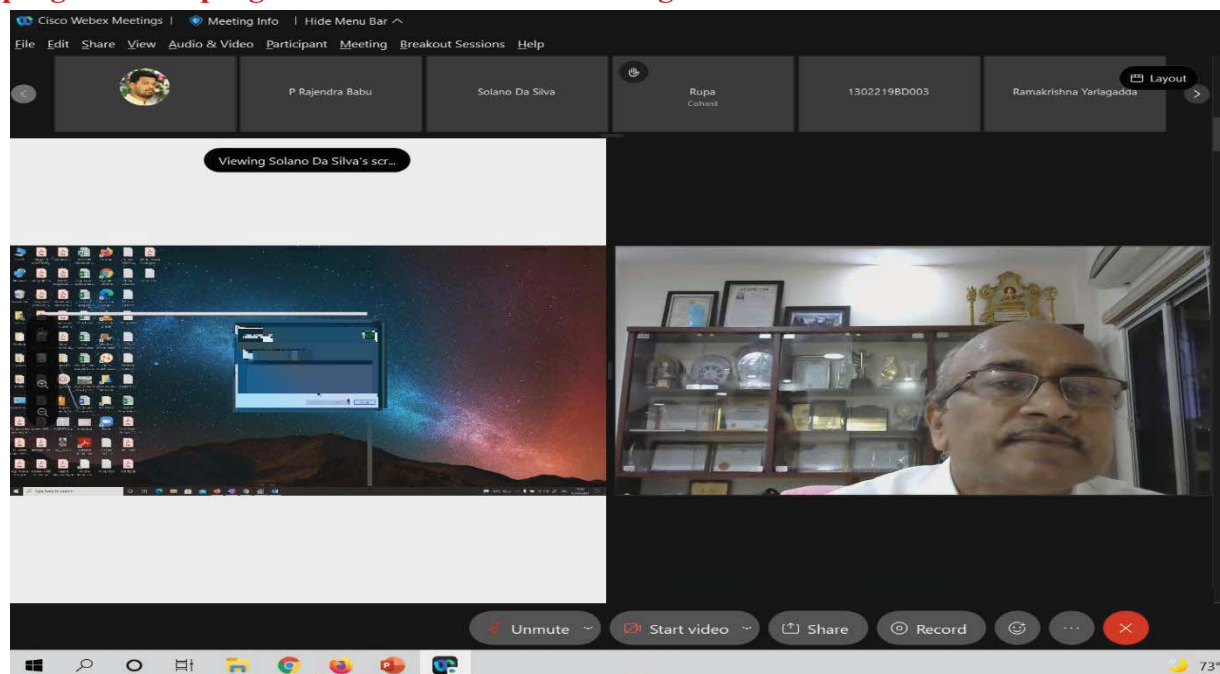
Mr Mukesh Chinta, Asst Prof, CSE @ 9052222633
 Email: mukesh.chinta@vrsiddhartha.ac.in

The Schedule of the Faculty Development Program is as follows.

Date	Time	
	SESSION-1: 10:00 - 11:30	SESSION-2: 2:00-3:30
13/09/2021	Dr. Solano Jose Savio Da Silva , BITS Pilani Topic: Overview of the Research Process	Dr. Suyel Namasudra NIT Patna Topic: Research Article Preparation
14/09/2021	Prof. Rajat Agrawal Head & IPR Coordinator, IIT Roorkee Topic: IPR	Prof. Rajat Agrawal Head & IPR Coordinator, IIT Roorkee Topic: IPR
15/09/2021	Sr. Prof. Arulmozhivarman , Dean, Research, VIT, Vellore. Topic: Qualitative Methodology	Dr. Sujata Kar, IIT Roorkee Topic: Research and sampling design
16/09/2021	Dr. Gunjan Soni , MNIT Jaipur Topic: Hypothesis Testing	Dr. Sujata Kar, IIT Roorkee Topic: Measurement and Scaling
17/09/2021	Dr. Sonu Rajak , NIT Patna Topic: Analysis of Variance (ANOVA)	Dr. Bharath Kumar IIT Tiruapathi Topic: Ethics in Research

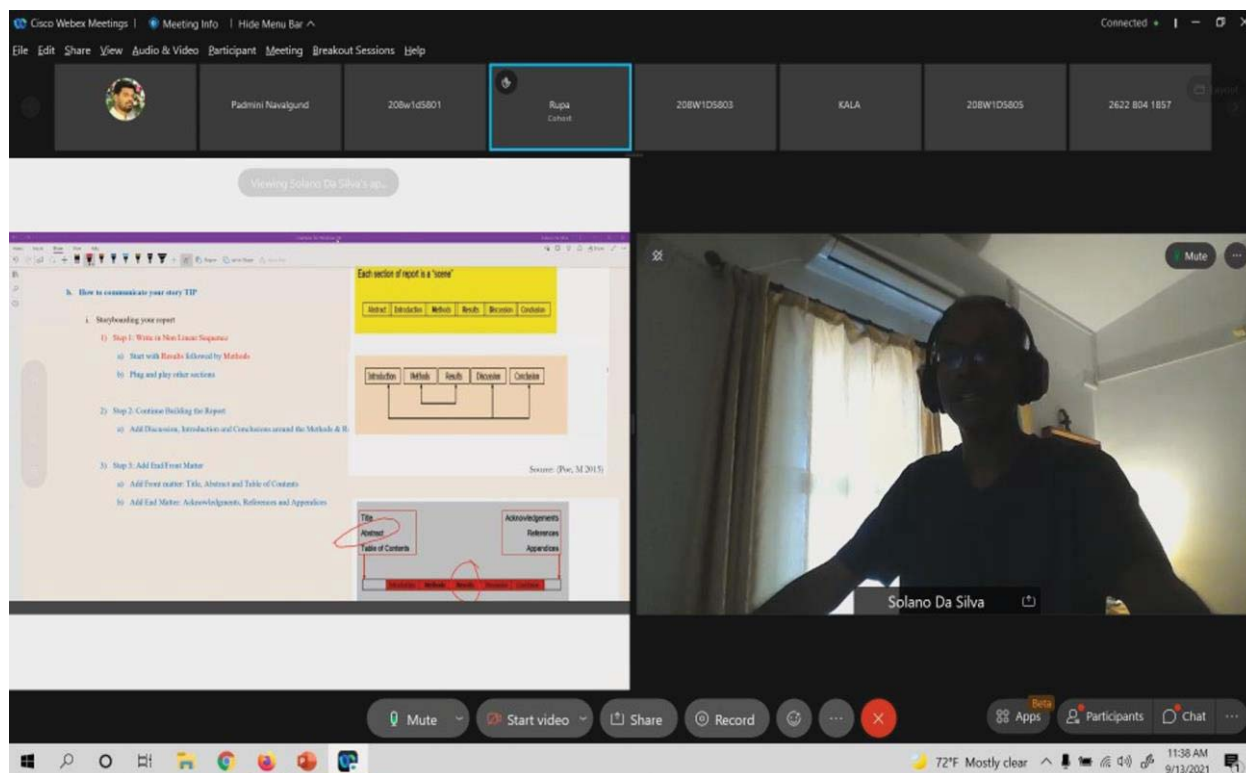
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A total of 198 participants from various institutions across India have participated in the program. The program started off with the inaugural session

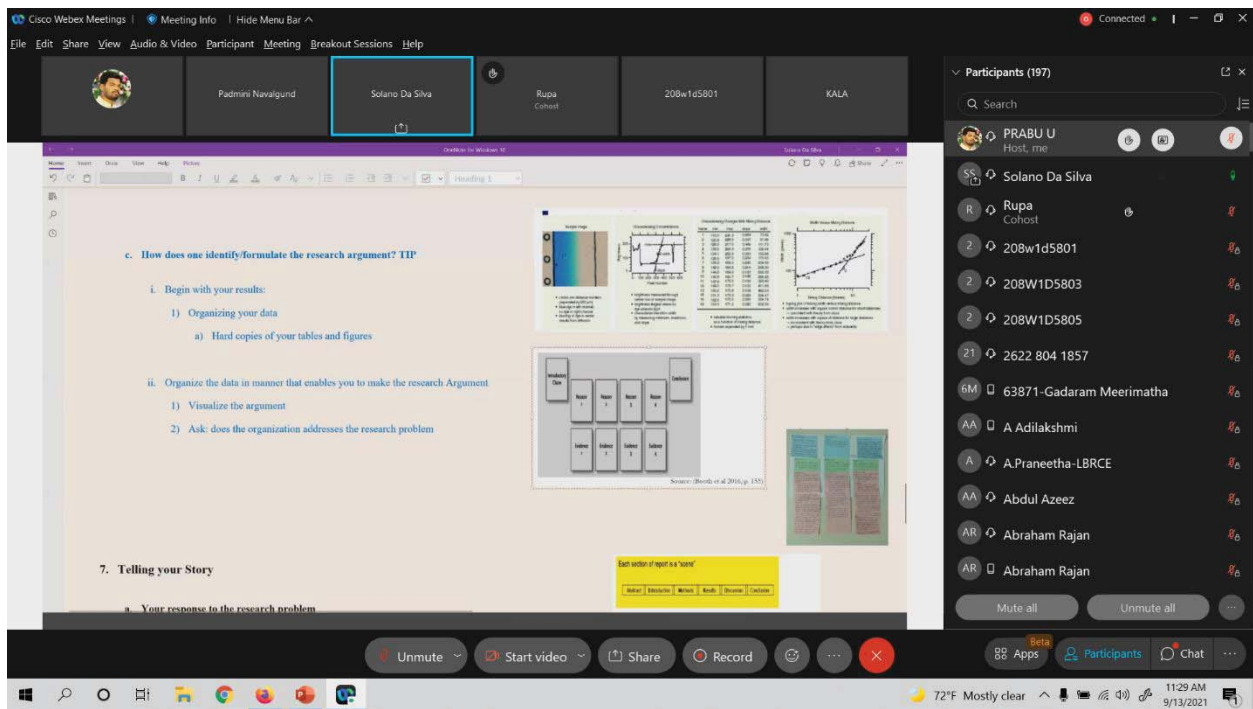


13-09-2021 (Session-1)

The morning session started off with an Inaugural session attended by Dr A V Ratna Prasad, Principal, V R Siddhartha Engineering College. He addressed all the participants regarding the importance of quality research, publications and IPR's. He welcomed the resource persons and also gave a brief introduction of Margdarshan scheme and importance of NBA Accreditation. Dr D Rajeswara Rao, Chief coordinator, AICTE Margdarshan scheme, Head of the Department, Dept of CSE addressed the participants welcoming them to the program and suggested to attend all the sessions without fail and be interactive with the resource persons. He spoke about the importance of collaborative research with industries and also publishing in quality journals.



Dr. Solano from BITS PILANI discussed about the Importance of Research. The study of research methods gives training to apply them to a problem. The study of research methodology provides us the necessary training in choosing methods, materials, scientific tools and training in techniques relevant for the problem chosen.



13-09-2021 (Session-2)

Dr. Suyel from NIT Patna was discussed on preparation of an article. Nearly all journal articles are divided into the following major sections: abstract, introduction, methods, results, discussion, and references. Usually the sections are labeled as such, although often the introduction (and sometimes the abstract) is not labeled. Sometimes alternative section titles are used.

He discussed that all journal articles are usually divided into the mentioned major sections: abstract, introduction, methods, results, discussion, and references. The sections are labeled as such, although often the introduction (and sometimes the abstract) is not labeled. Sometimes alternative section titles are used. The abstract is sometimes called the "summary", the methods are sometimes known as "materials and methods", and the discussion is labelled "conclusions". Some journals also include the minor sections of "key words" following the abstract, and "acknowledgments" following the discussion. In some journals, the sections may be divided into subsections that are given descriptive titles. However, the general division into the six major sections is nearly universal. Dr Suyel said the keywords also play a key role and should be carefully selected reflecting the core of the article.

Fig. 10. CPU utilization

The last simulation process is for calculating CPU utilization. In Figure 10, it can be easily seen that the utilization of CPU of the proposed DNASF is linearly increased with the number of users. The number of data accessing requests is also increased, when the number of user is increased. As the data accessing time is less in the proposed DNASF, the cloud service provider does not take a large amount of time to provide the service. Therefore, the utilization of CPU is less. However, the CSP takes an abundant time for responding to the users in the existing schemes because the accessing time of data is high. The CPU utilization has been calculated per 5 second that implies 12 values per minutes. Finally, the average value has been taken out of all these values. The following Eq. (1) has been utilized to compute CPU

Dr Suyel also stressed the importance of results section. The function of this section is to summarize general trends in the data without comment, bias, or interpretation. The results of statistical tests applied to your data are reported in this section although conclusions about your original hypotheses are saved for the Discussion section. Tables and figures should be used when they are a more efficient way to convey information than verbal description. They must be independent units, accompanied by explanatory captions that allow them to be understood by someone who has not read the text. Do not repeat in the text the information in tables and figures, but do cite them, with a summary statement when that is appropriate.

6 CONCLUSIONS AND FUTURE WORKS

In this paper, a novel access control model is proposed for the cloud computing environment by using a table and DNA computing for secure and efficient data accessing. In the proposed technique, a 1024-bit secret key is created based on the user's attributes to improve data security, and the same 1024-bit key is used to encrypt the data in the proposed DNA based data encryption phase. The proposed scheme is secured against some security attacks, namely password guessing attack, DDoS attack, masquerade attack, stolen verifier attack and phishing attack by supporting randomness in the data encryption and secret key generation phase. Here, the system overhead is reduced as the data owners can go offline, when s/he provides the data decryption key to the user. Many experiments are executed to evaluate the performance of the proposed scheme, which show its efficiency. The identity management technique of a cloud environment can be improved in the future.

[15] X. P. Zhao and R. Jiang, "Distributed machine learning oriented data integrity verification scheme in cloud computing environment," *IEEE Access*, vol. 8, pp. 26372-26384, 2020.

[16] L. M. Adleman, "Molecular computation of solutions to combinatorial problems," *Science*, vol. 266, no. 5187, pp. 1021-1024, 1994.

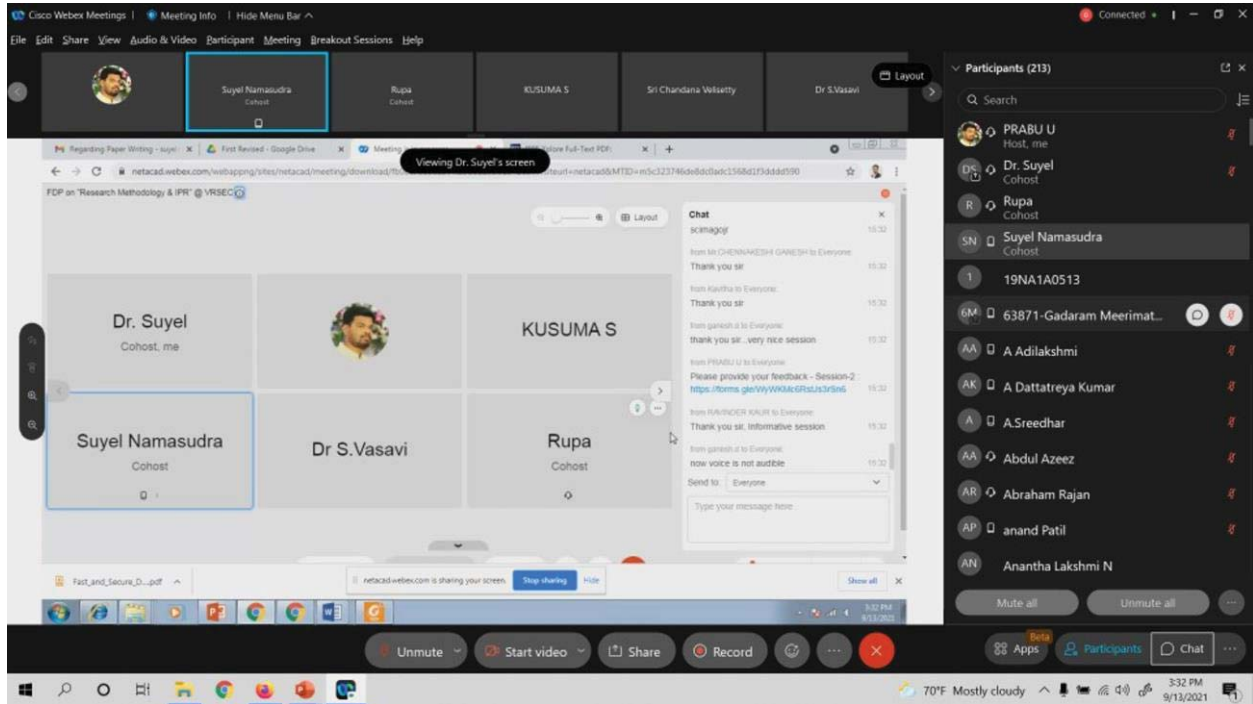
[17] C. T. Clelland, V. Riscoe, and C. Bancroft, "Hiding messages in DNA microdots," *Nature*, vol. 399, no. 6736, pp. 533-534, 1999.

[18] K. Tanaka, A. Okamoto, and I. Saito, "Public-key system using DNA as a one-way function for key distribution," *Biosystems*, vol. 81, no. 1, pp. 25-29, 2005.

[19] R. Enayatifar, A. H. Abdullah, and I. F. Isnin, "Chaos-based image encryption using a hybrid genetic algorithm and a DNA sequence," *Optics and Lasers in Engineering*, vol. 56, pp. 83-93, 2014.

[20] U. Tuncer and E. Avcı, "A reversible data hiding algorithm based on probabilistic DNA-XOR secret sharing scheme for color images," *Displays*, vol. 41, pp. 1-8, 2016.

[21] B. Wang et al., "Reversible data hiding based on DNA computational Intelligence and Neuroscience, 2017. DOI: 10.1109/ICIN.2017.8221111"



14-09-2021 (Session-3 & 4)

Prof. Rajat from IIT Roorkee was discussed on IPRs. Intellectual property (IP) is a category of property that includes intangible creations of the human intellect.



There are many types of intellectual property, and some countries recognize more than others. The most well-known types are copyrights, patents, trademarks, and trade secrets. The modern concept

of intellectual property developed in England in the 17th and 18th centuries. The term "intellectual property" began to be used in the 19th century, though it was not until the late 20th century that intellectual property became commonplace in the majority of the world's legal systems. The intangible nature of intellectual property presents difficulties when compared with traditional property like land or goods. Unlike traditional property, intellectual property is "indivisible", since an unlimited number of people can "consume" an intellectual good without it being depleted.

Intellectual Property rights (IPR)

Copyright and Related Rights	Industrial properties
<ul style="list-style-type: none"> Literary Novel Poem Plays Films Musical Artistic Drawings Photographs Performing arts Sculptures Software 	<ul style="list-style-type: none"> Patents Industrial designs Trademarks Trade secrets Protection of New Plant Varieties Layout Designs/Topographies Integrated Circuits Geographical Indications

Chat:

- I can become an owner from Kavitha S to everyone: 10:47 AM exclusive right I can get
- from K.Boopathy to everyone: 10:49 AM
- I am getting the writing from patented person from K.Boopathy to everyone: 10:49 AM right
- from SABA SULTANA to everyone: 10:55 AM
- YES SIR
- from K. Jayalakshmi to everyone: 10:55 AM
- Yes sir
- from R. VENKATESH to everyone: 10:55 AM
- Yes sir

Authors Rights

Moral rights	Economic rights
<ul style="list-style-type: none"> ✓ To protect personality of author ✓ Right of Authorship ✓ Right of Integrity ✓ Digital Manipulation ✓ No Right for Display ✓ Inalienable Rights 	<ul style="list-style-type: none"> To bring economic benefits

Participants (220):

- PRABU U (Host, me)
- Prof Rajat Agrawal (Cohost)
- Rupa (Cohost)
- 1302219BD003
- A Adilakshmi
- A Dattatreya Kumar
- A.Praneetha-LBRCE
- A.Ravi Kumar
- A.Sreedhar
- Abdul Azeez
- Abraham Rajan
- anand Patil
- Anantha Lakshmi N

Cisco Webex Meetings | Meeting Info | Hide Menu Bar ^

File Edit Share View Audio & Video Participant Meeting Breakout Sessions Help

Rupa Host, me 2622 804 1857 A Adilakshmi

Prof Rajat Ag... (Cohost) (↑)

The Chain of Activities in IP Management

- Creation
- Protection
- Commercialization
- Enforcement

Participants (182)

Search

R Rupa Host, me

PA Prof Rajat Agrawal Cohost

21 2622 804 1857

AA A Adilakshmi

Mute all Unmute all

Chat

from KJeyalakshmi to everyone: 3:23 PM

Yes sir

To: Everyone

Enter chat message here

Unmute Start video Share Record

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Rupa Host, me 2622 804 1857 63871-Gadaram Meerima... Layout

Prof Rajat Ag... (Cohost) (↑)

Viewing Prof Rajat Agrawal...

Domestic and Foreign Application in India

	Indian Resident Applications	Non-Resident applications	Total Applications	Filed by Inventors as Applicant
FY 2015-16	11886	21818	33704	21495
FY 2016-17	11779	32751	44530	29115
FY 2017-18	12506	22294	34800	22236
FY 2018-19	11820	21954	33774	21845
FY 2019-20	20871	29480	50351	31415

Source DPIIT

Participants (187)

Search

R Rupa Host, me

PA Prof Rajat Agrawal Cohost

21 2622 804 1857

GM 63871-Gadaram Meerimatha

AA A Adilakshmi

AK A Dattatreya Kumar

A A.Praneetha-LBRCE

AA Abdul Azeez

AR Ahraham Raian

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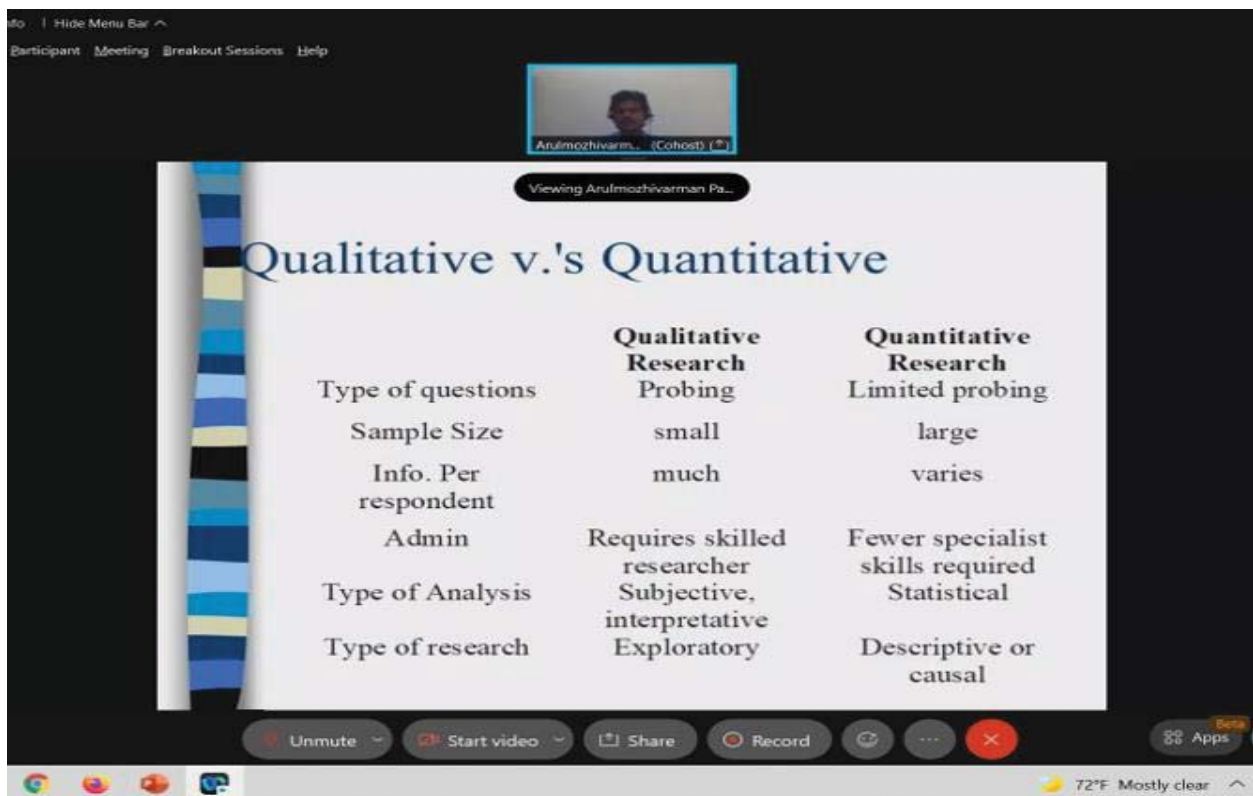
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15-09-2021 (Session-5)

FDP Report

13th - 17th September 2020

Prof. Arul from VIT Vellore discussed on Qualitative methodology. Quantitative research is concerned with measurement and numbers, while qualitative research is concerned with understanding and words.



The screenshot shows a Cisco Webex Meeting interface. At the top, there's a meeting title bar with 'Cisco Webex Meetings | Meeting Info | Hide Menu Bar'. Below that, a toolbar includes 'File', 'Edit', 'Share', 'View', 'Audio & Video', 'Participant', 'Meeting', 'Breakout Sessions', and 'Help'. The main content area displays a presentation slide titled 'How to construct the search concept?'. The slide features a flowchart with three main steps: 'Identify keywords & main concepts' (green box), 'List synonyms for each concept' (green box), and 'Think of the broader terms for each concept to get a better perspective on your research topic' (orange box). Arrows indicate the flow from the first step to the second, and then to the third. The slide also includes the date '9/15/2021', the course 'FDP on Research Methodology', and the presenter '@VRSEC Vijayawada'. The bottom of the slide has a page number '67'. The meeting interface also shows a 'Participants (188)' list on the right, with names like Anantha Lakshmi N, Anees, ANISH. T. P, etc. At the bottom, there are controls for 'Unmute', 'Start video', 'Share', 'Record', and 'Apps'. The system tray at the very bottom shows the date '9/15/2021' and time '11:31 AM'.

Quantitative research is used to quantify the problem. Its main goal is to generate numerical data or data that can be turned into statistics. It uses measurable data to formulate facts and uncover patterns in research. Quantitative data collection methods include various forms of surveys (online surveys, paper surveys, mobile surveys, kiosk surveys, etc.), face-to-face interviews, telephone interviews, longitudinal studies, website interceptors, online polls, and systematic observations.

15-09-2021 (Session-6)

The screenshot shows a Cisco Webex Meeting interface. At the top, there's a meeting title bar with 'Cisco Webex Meetings | Meeting Info | Hide Menu Bar'. Below that, a toolbar includes 'File', 'Edit', 'Share', 'View', 'Audio & Video', 'Participant', 'Meeting', 'Breakout Sessions', and 'Help'. The main content area displays a presentation slide titled 'Research & Sampling Design'. The slide features the logo of the Indian Institute of Technology Roorkee and the text 'Research & Sampling Design' and 'Dr. Sujata Kar, Department of Management Studies, IIT Roorkee'. The slide also includes an image of the IIT Roorkee building. The meeting interface also shows a 'Participants' list on the right, with names like mastan, A.Praneetha-LBRCE, Ariharasudhan S, etc. At the bottom, there are controls for 'Mute', 'Start video', 'Share', 'Record', and 'Apps'. The system tray at the very bottom shows the date '9/15/2021' and time '1:57 PM'.

Dr Sujata kar from IIT Roorkee was delivered on measuring and scaling concepts. Scaling technique is a method of placing respondents in continuation of gradual change in the pre-assigned values, symbols or numbers based on the features of a particular object as per the defined rules. All the scaling techniques are based on four pillars, i.e., order, description, distance and origin.

The screenshot shows a Cisco Webex meeting interface. At the top, there is a participant bar with names: Mohammed Awase, SAURABH, Rupa Cohost, mastan, 2022 804 1857, A Dattatreya Kumar, and A.Praneetha-LBRCE. The main content area is split into two parts. On the left, a slide titled "Types of Research Design" lists three points:

1. Research design for exploratory research studies
2. Research design in case of descriptive and diagnostic research studies
3. Research design in case of hypothesis-testing research studies

 On the right, a video feed shows Dr. Sujata Kar, a woman with glasses and a white lab coat, sitting at a desk in a room with bookshelves. The bottom of the screen shows the meeting controls: Unmute, Start video, Share, Record, and a Participants list.

The screenshot shows a Cisco Webex meeting interface. At the top, there is a participant bar with names: MUKESH CHINTA, Sujata Kar (Cohost), Rupa Cohost, A Adilakshmi, A Dattatreya Kumar, A.Praneetha-LBRCE, ABDUL AZEEZ, Abraham Rajan, anand Patil, Anees, ANISH. T. P, ANNAPAREDDY V N REDDY, and aparna. The main content area is split into two parts. On the left, a slide titled "Example: 2 x 2 Simple Factorial Design" displays two data tables.

STUDY I DATA

		Training		Row Mean
		Treatment A	Treatment B	
Control (Intelligence)	Level I (Low)	15.5	23.3	19.4
	Level II (High)	35.8	30.2	33.0
Column mean		25.6	26.7	

STUDY II DATA

		Training		Row Mean
		Treatment A	Treatment B	
Control (Intelligence)	Level I (Low)	10.4	20.6	15.5
	Level II (High)	30.6	40.4	35.5
Column mean		20.5	30.5	

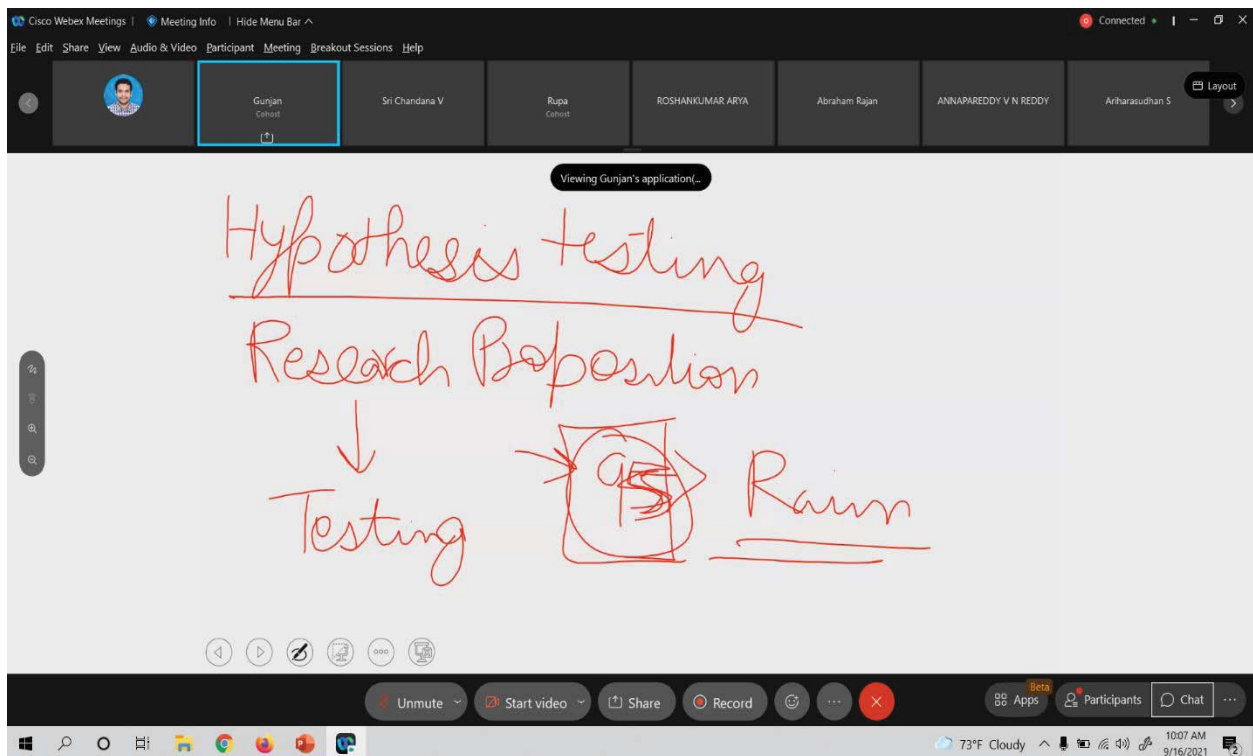
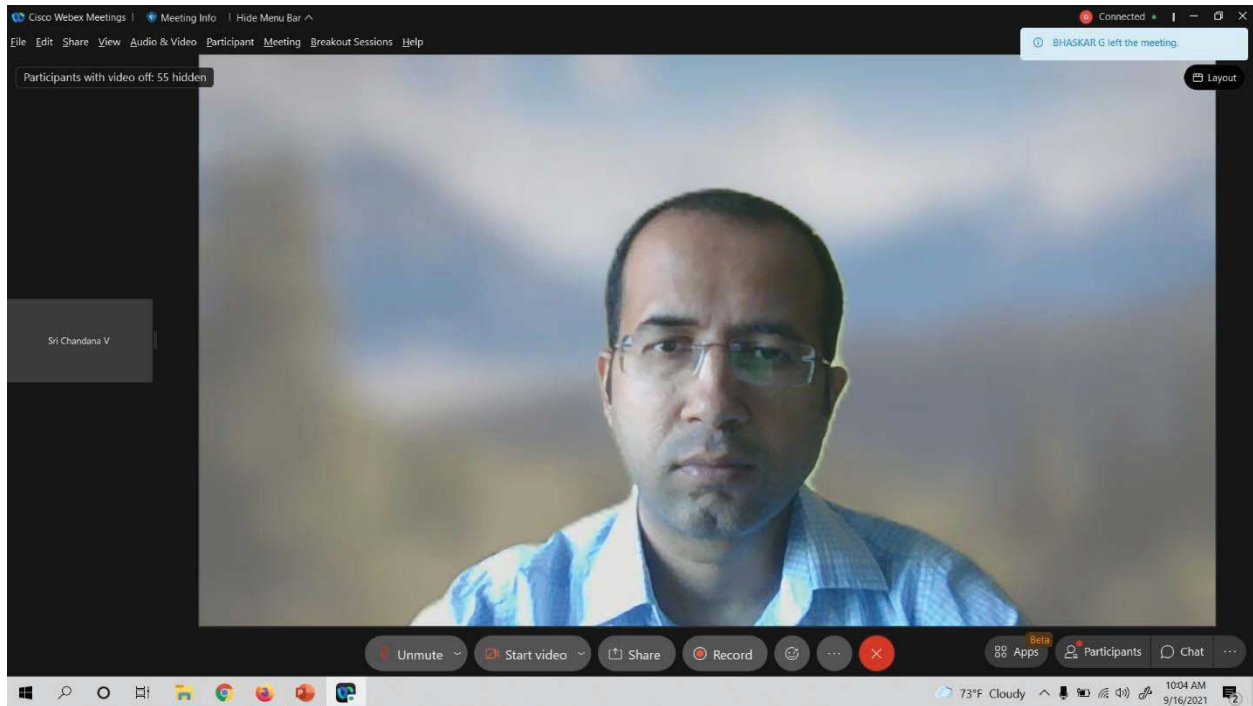
 On the right, a participants list shows 177 participants. The bottom of the screen shows the meeting controls: Unmute, Start video, Share, Record, and a Participants list.

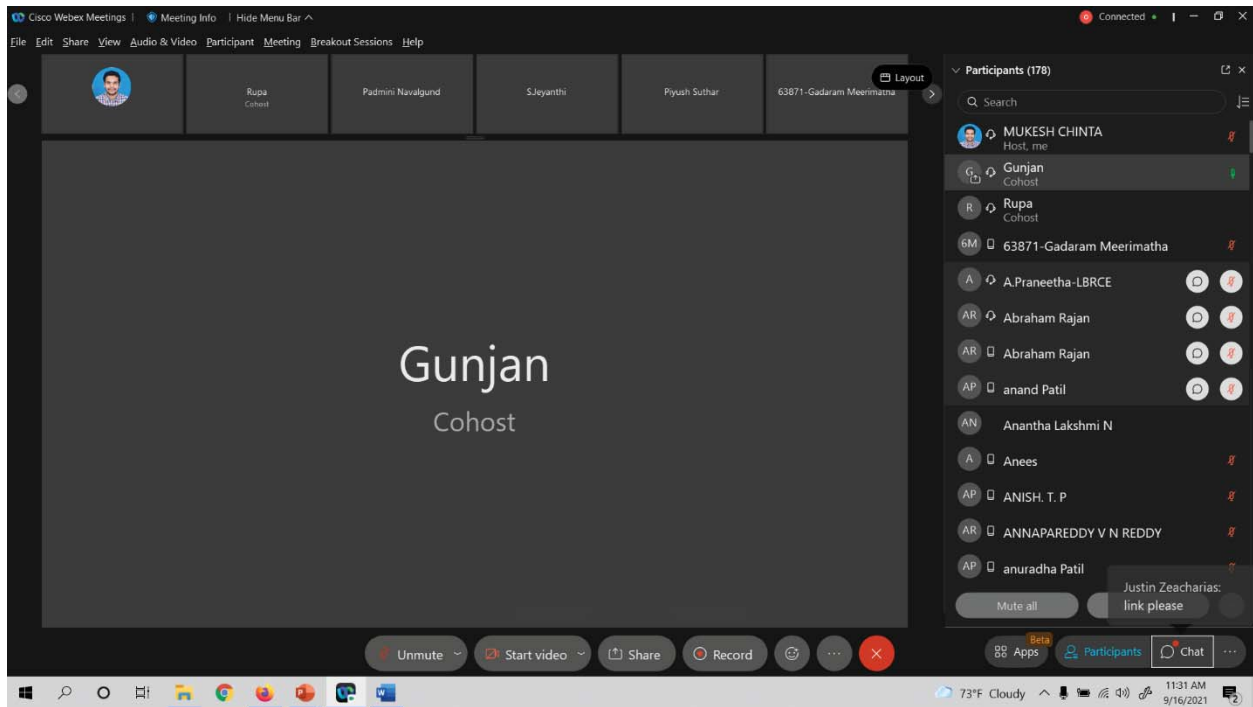
16-09-2021 (Session-7)

FDP Report

13th - 17th September 2020

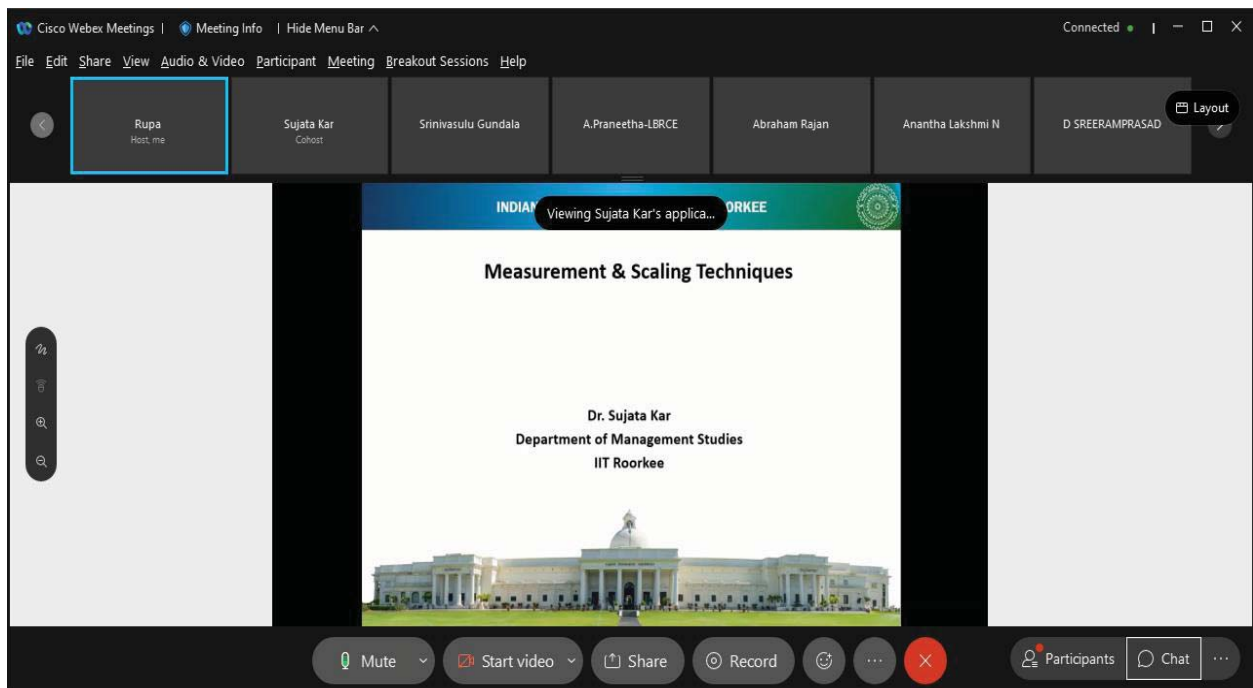
Dr. Gunjan from MNIT Jaipur was discussed on Hypothesis testing. Hypothesis testing is an act in statistics whereby an analyst tests an assumption regarding a population parameter. The methodology employed by the analyst depends on the nature of the data used and the reason for the analysis.





Hypothesis testing is used to assess the plausibility of a hypothesis by using sample data. Such data may come from a larger population, or from a data-generating process. The word "population" will be used for both of these cases in the following descriptions. The test provides evidence concerning the plausibility of the hypothesis, given the data. Statistical analysts test a hypothesis by measuring and examining a random sample of the population being analyzed.

16-09-2021 (Session-8) - Dr. Sujata Kar



Introduction

- Construct development helps in identifying the subjective properties to be measured
- Scale measurement determines how to measure precisely
- Scale points are designated degrees of intensity assigned to the responses to a question

117 ROORKEE 16

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Criteria for Scale Development

- Intelligibility of the Questions
- Appropriateness of Primary Scale Descriptors
- Discriminatory Power of the Scale Descriptors
- Reliability of Scales
- Balanced Positive/Negative Scale Descriptors
- Inclusion of Neutral Response Choice

117 ROORKEE 16

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Research design is the framework of research methods and techniques chosen by a researcher. The design allows researchers to hone in on research methods that are suitable for the subject matter and set up their studies up for success. The design of a research topic explains the type of research (experimental, survey, correlation, semi-experimental, review) and also its sub-type (experimental

design, research problem, descriptive case-study). There are three main types of designs for research: Data collection, measurement, and analysis.

17-09-2021 (Session-9)

Dr. Sonu Rajak from NIT Patna was discussed on Design and Experiment and ANOVA test. Experimental design includes the way the treatments were administered to subjects, how subjects were grouped for analysis, how the treatments and grouping were combined.

Viewing Dr. Sonu Rajak's screen...

DESIGN OF EXPERIMENTS (DOE)

Dr. Sonu Rajak
Assistant Professor
National Institute of Technology Patna
Patna- 800005

Dr. SATULURI NAGANJANEY...
Rupa Cohost

ANNAPAREDDY V N REDDY
Ashwini R.H
B SATYANARAYANA MURTHY
B. Noorul Hamitha

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71°F Cloudy 10:05 AM 9/17/2021

Viewing Dr. Sonu Rajak's screen...

ANOVA Table

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	F _{crit}
Cutting Speed (A)	0.667	1	0.667	0.022	4.49
Tool Geometry (B)	770.667	1	770.667	25.520	4.49
Cutting Angle (C)	280.167	1	280.167	9.278	4.49
AB	16.167	1	16.167	0.535	4.49
BC	48.167	1	48.167	1.595	4.49
AC	468.167	1	468.167	15.503	4.49
ABC	28.167	1	28.167	0.933	4.49
Error	483.164	16	30.198		
Total	2095.333	23			

Dr. SATULURI NAGANJANEY...
Rupa Cohost

A.Praneetha-LBRCE
ABDUL AZEEZ

Participants (185)

- MUKESH CHINTA (Host, me)
- Dr. Sonu Rajak (Cohost)
- Rupa Cohost
- A.Praneetha-LBRCE
- ABDUL AZEEZ
- Abraham Rajan
- anand Patil
- Anees
- ANISH, T. P
- ANNAPAREDDY V N REDDY
- anuradha Patil
- Ariharasudhan S

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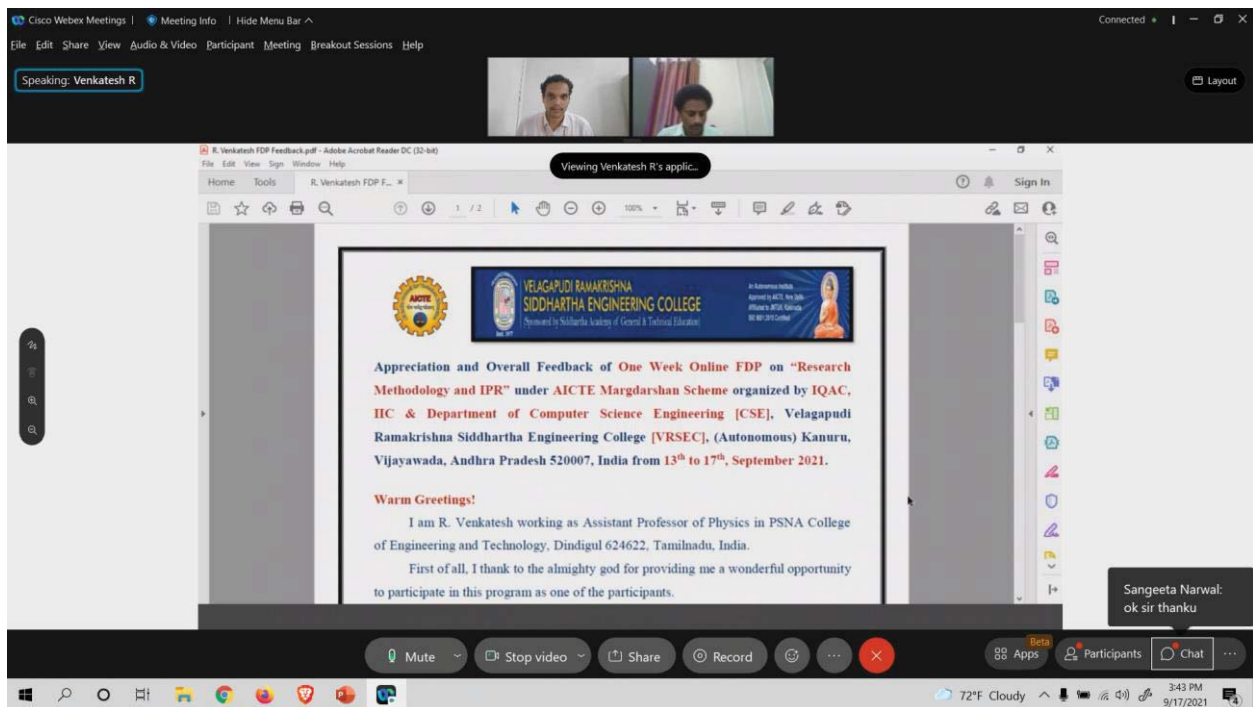
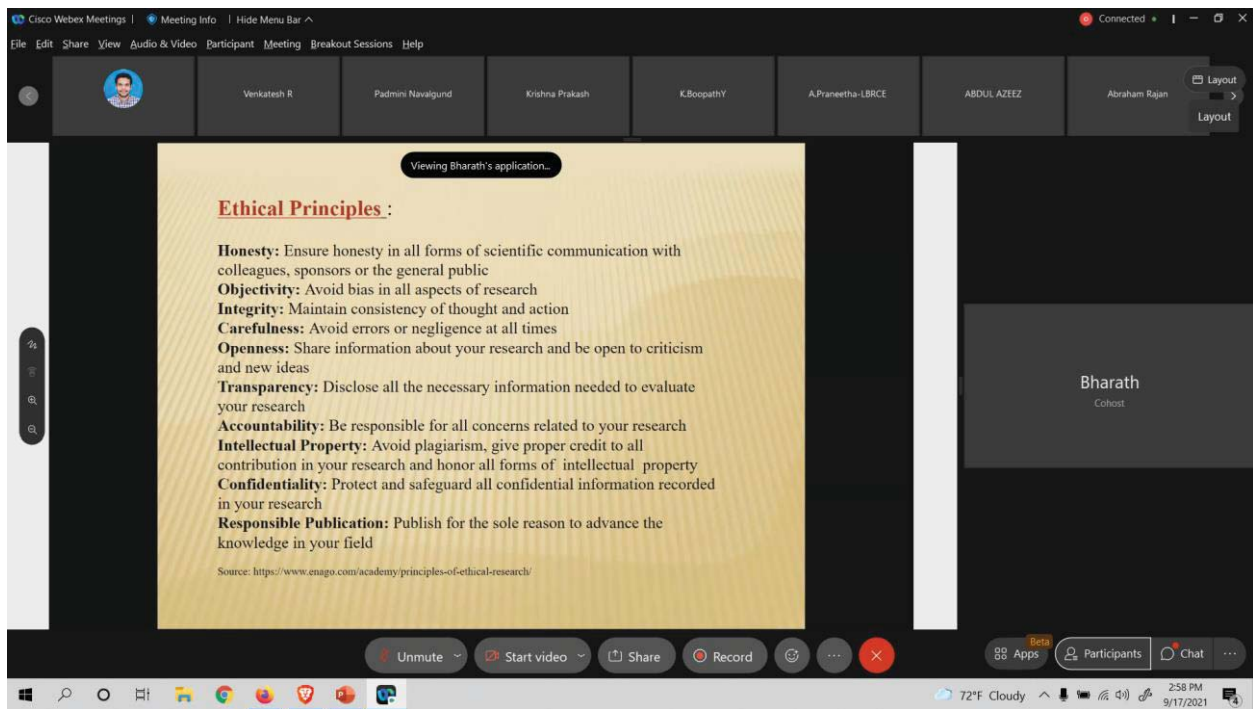
71°F Cloudy 11:33 AM 9/17/2021

In ANOVA there is a single dependent variable or score. In ANOVA there is at least one independent variable or factor.

17-09-2021 (Session-10)

Dr. Bharath Kumar from IIT Tirupati deliver a lecture on Ethics in Research misconduct can have dire consequences. For instance, surgeon Paolo Macchiarini conducted experiments on patients without sound preclinical data.





He worked on artificial transplantation of trachea within several patients, which turned out to be pathbreaking in medical history. However, it was all based on lies and fabricated data. Most of the patients who took part in his trial (seven of nine) died. He altered his published results to make it look as if his trachea transplant work was more successful than it really was. This was a severe consequence of the breach of research ethics. The valedictory session was organized at 3.45 PM with the participants sharing their feedback regarding the program.

FDP Report

13th - 17th September 2020