Program Completion Report
Of

Online Workshop on Drone Design and Development

A weekender event held during 3rd to 31st October 2021

(Workshop Dates: 03/10/21, 09/10/21, 23/10/21, 30/10/21, 31/10/21)

Organized by

Department of Production & Industrial Engineering
In Association with
Society of Industrial and Management Engineering
Birla Institute of Technology, Mesra
Ranchi

Program Completion Report

The Department of Production and Industrial Engineering in association with Society of Industrial Management and Engineering at BIT Mesra, Ranchi successfully conducted an Online Workshop on Drone Design and Development in the month of October 2021. This online workshop was a 5-day weekender event, and the sessions were held on 03/10/21, 09/10/21, 23/10/21, 30/10/21 and 31/10/21. The workshop was a pan-BIT event where students from BIT Mesra and the extension centers were allowed to register and participate. The workshop was a learning experience for the participants on the basic theory for the development and assembly of drones. The lectures were delivered by eminent resource persons from the field of drones, unmanned aerial vehicles and aerodynamics. The first four sessions were delivered by resource person Air Commodore Pradeep Kumar Choudhary VSM (Retd.) and the fifth lecture was delivered by Dr. Priyank Kumar. The workshop has provided a scope to the participants to gain knowledge about the basics of drone design, safety, maintenance, and rules in a comprehensive manner. The participant strength for the workshop included 25 students from the BIT community and interested faculty members who successfully completed the workshop.

Dr. Vinay Sharma

Organizing Committee

Dr. Gayatri Paul

Organizing Committee

Dr. Suman Samanta

Organizing Committee

Approval for the Online Workshop

DEPARTMENT OF PRODUCTION & INDUSTRIAL ENGINEERING
BIRLA INSTITUTE OF TECHNOLOGY, MESRA RANCHI-835215
Email: hod.pe@bitmesra.ac.in, phone: +91-651-2275444(Ext-4474), Fax: +91-651-2275401

To
The Vice Chancellor
Birla Institute of Technology, Mesra, Ranchi

Approved 15-9-21

Dated: September 15, 2021

Subject: Permission for conducting workshop on 'Drone Design and Development' and necessary budgetary approval for the same.

Dear Sir,

The Department of Production and Industrial Engineering is planning to organize a workshop on the topic of 'Drone Design and Development'. The resource person for the workshop would be Air Commodore P. K. Choudhary, VSM (Retd). He has agreed to deliver lectures on basic topics of drone design ranging from fundamentals of quad-rotor theory to design and assembly of a simple quadcopter, drone rules 2021, etc. He also desires to demonstrate some hands-on on the development of drones.

The lectures of the workshop will be held during 4 consecutive Saturday mornings. After completion of the lecture series, a competition will be held among the students to develop a DIY drone.

A remuneration of Rs. 5000/- per lecture will be given to Air Commodore P. K. Choudhary. The total budget for the remuneration amounts to (Rs. 5000 × 4 =) Rs. 20,000/- for the workshop as of now.

The main target audience of this workshop will be students interested to learn keenly about drone technology from the eminent resource person. Interested faculty members may also join the workshop. The department is planning to make this a pan-BIT event.

An entry fee of Rs. 200/- will be collected from the participating students and the collected amount will be utilized as the prize money for the best project award for the competition.

It is, therefore, requested that you to kindly permit me to conduct the workshop and provide a budgetary approval of Rs. 20,000/- for the same from departmental budget.

Thanking you

Yours sincerely

15/9/21

Dr. Joyjeet Ghose

Received
47615
2021
esra

ISSUE
47615

Dr. Joyjeet Ghose, Head, Email: joyjeet@bitmesa.ac.in MOBILE NO.: 9801339620

About the Workshop

The Online Workshop on Drone Design and Development was organized by the Department of Production and Industrial Engineering in association with Society of Industrial and Management Engineering as a weekender event during 5 days over the month of October 2021. The primary resource person of the workshop was Air Commodore Pradeep Kumar Choudhary VSM (Retd.) who took the first four sessions of the workshop. He is the receiver of Vishisht Seva Medal by the President of India, the founder of General Aeronautics Pvt Ltd and a specialist Consultant at Aeronautical Development Agency. The topics covered by the resource person included Fundamentals of Quad-rotor Theory, Drone Dynamics, Risks & Reliability Design & Assembly of a Quadcopter, and Drone Rules 2021. The fifth session was delivered by Dr. Priyank Kumar, Assistant Professor, Department of Space Engineering and Rocketry. The topics covered by the resource person included Aerodynamic of Aero-Vehicles and AICTE Idea labs at BIT Mesra.

Session I	
Resource Person	Air Commodore P. K. Choudhary VSM (Retd.)
Topic	Basics of Quad-theory and Drone Dynamics
Date	03/10/2021
Time	11 AM to 1 PM

Session II	
Resource Person	Air Commodore P. K. Choudhary VSM (Retd.)
Topic	Risk and Reliability Analysis of UAV
Date	09/10/2021
Time	11 AM to 1 PM

Session III	
Resource Person	Air Commodore P. K. Choudhary VSM (Retd.)
Topic	Design and Assembly of a Simple Quadcopter
Date	23/10/2021
Time	11 AM to 1 PM

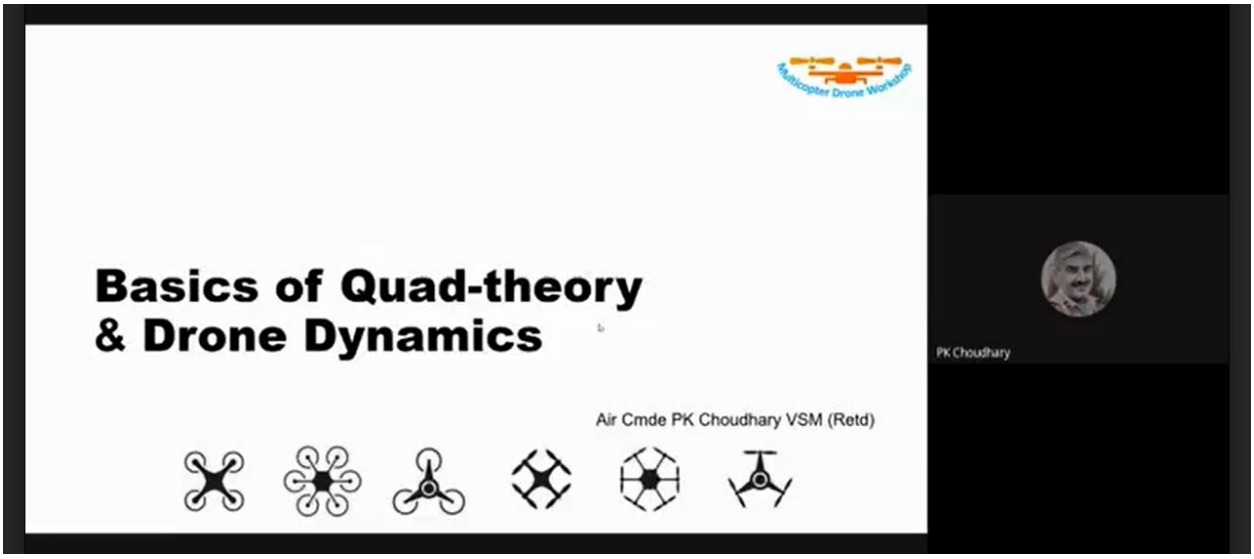
Session IV	
Resource Person	Air Commodore P. K. Choudhary VSM (Retd.)
Topic	UAV Maintenance – A Concept
Date	30/10/2021
Time	11 AM to 1 PM

Session V	
Resource Person	Dr. Priyank Kumar
Topic	Aerodynamic of Aero-Vehicles and AICTE Idea labs at BIT Mesra
Date	31/10/2021
Time	11 AM to 1 PM

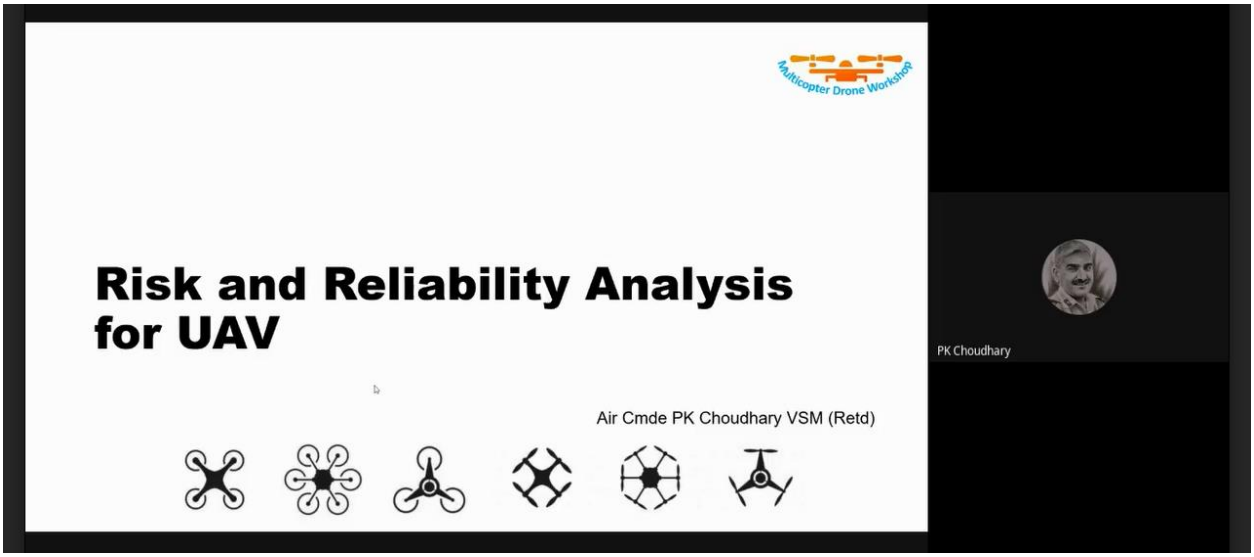
Workshop Brochure

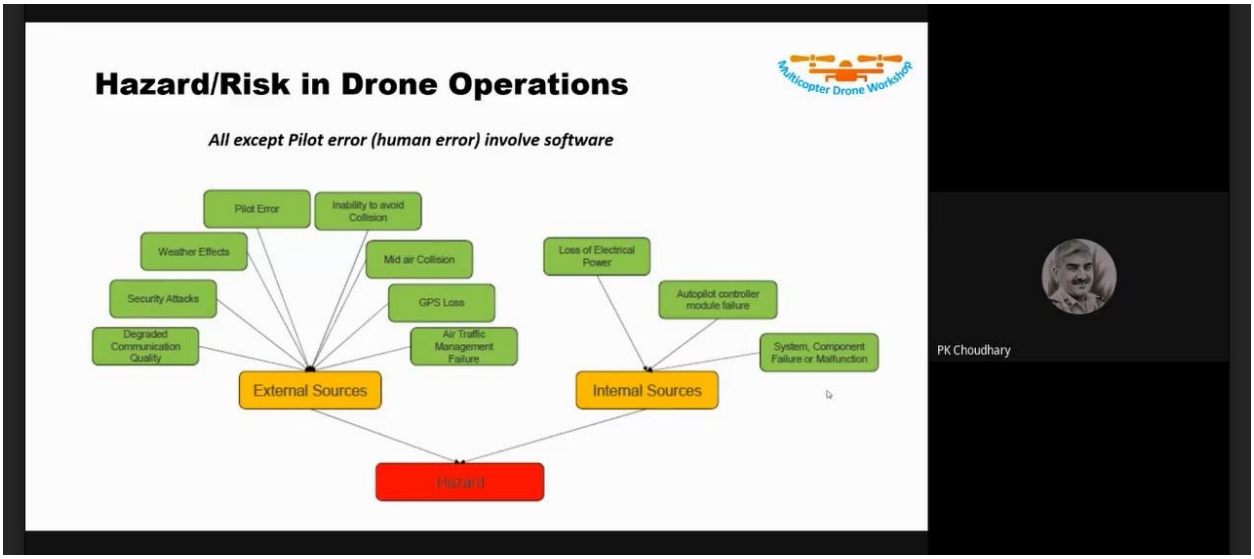
Workshop Poster

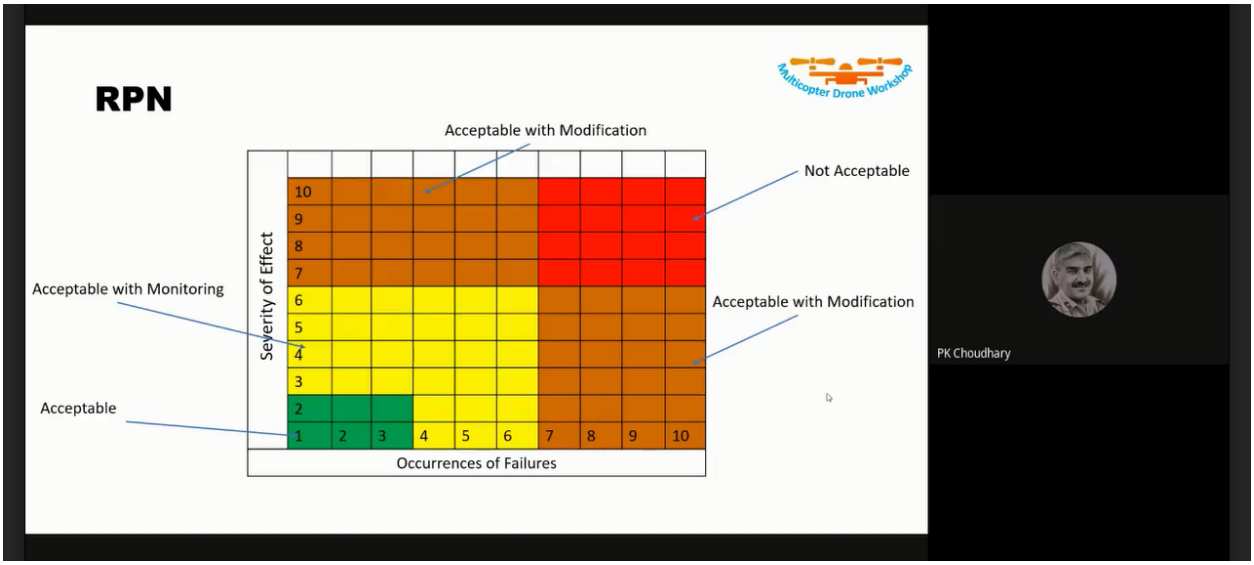
Session I Screenshots: Speaker: Air Commodore P. K. Choudhary VSM (Retd.)



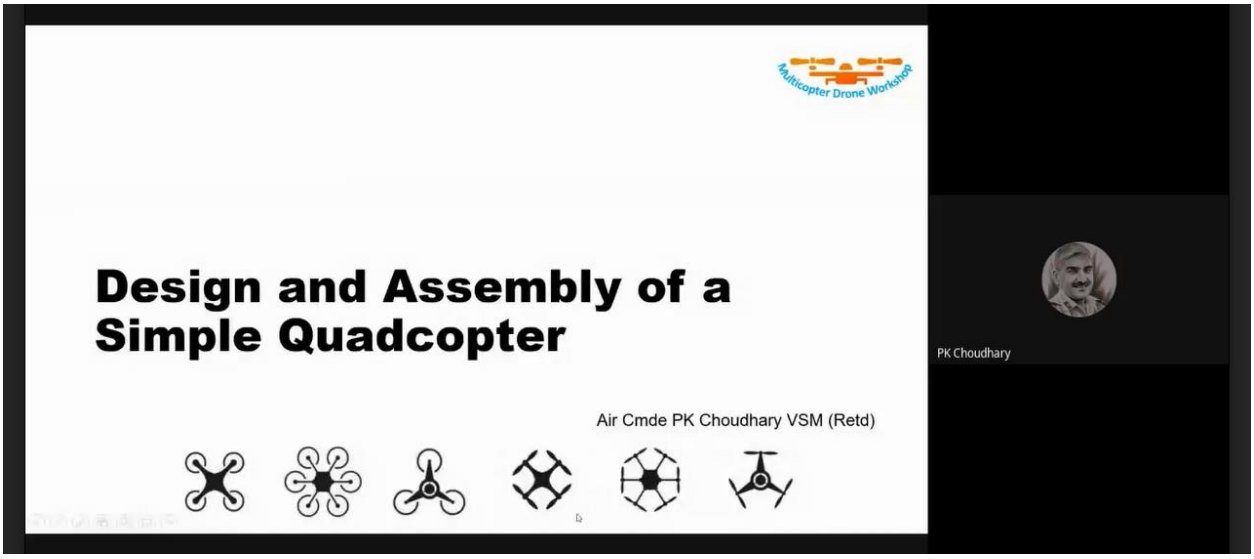
Session II Screenshots: Speaker: Air Commodore P. K. Choudhary VSM (Retd.)

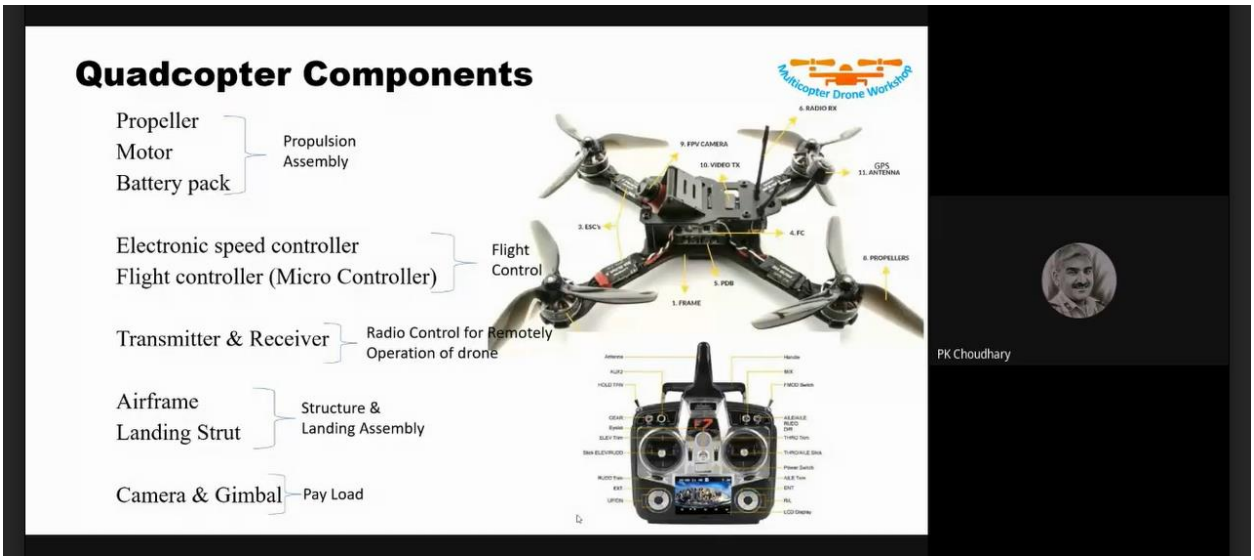


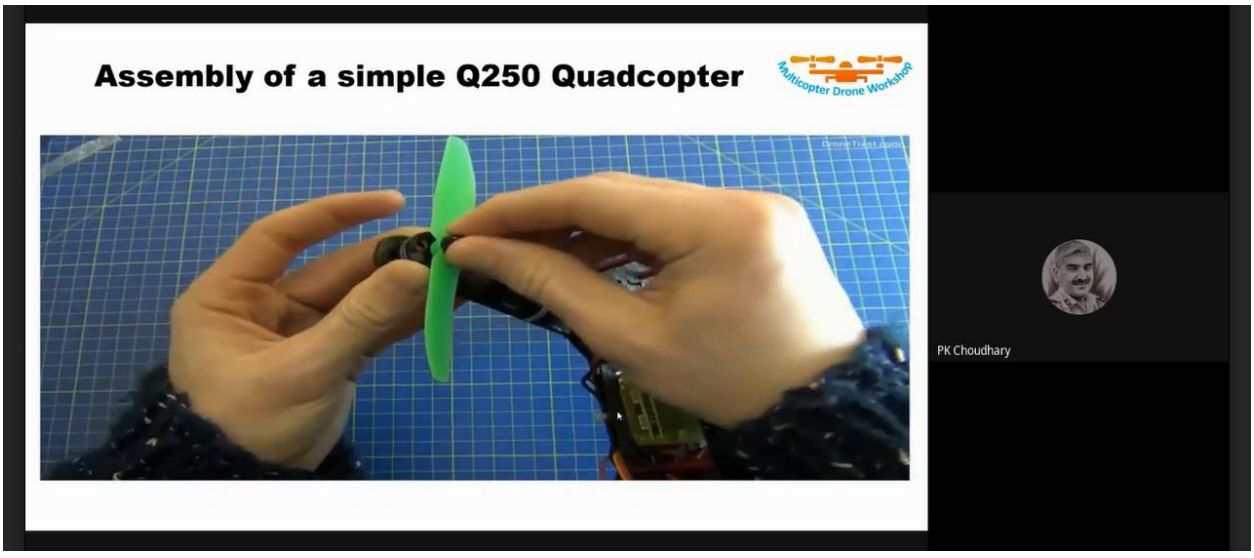




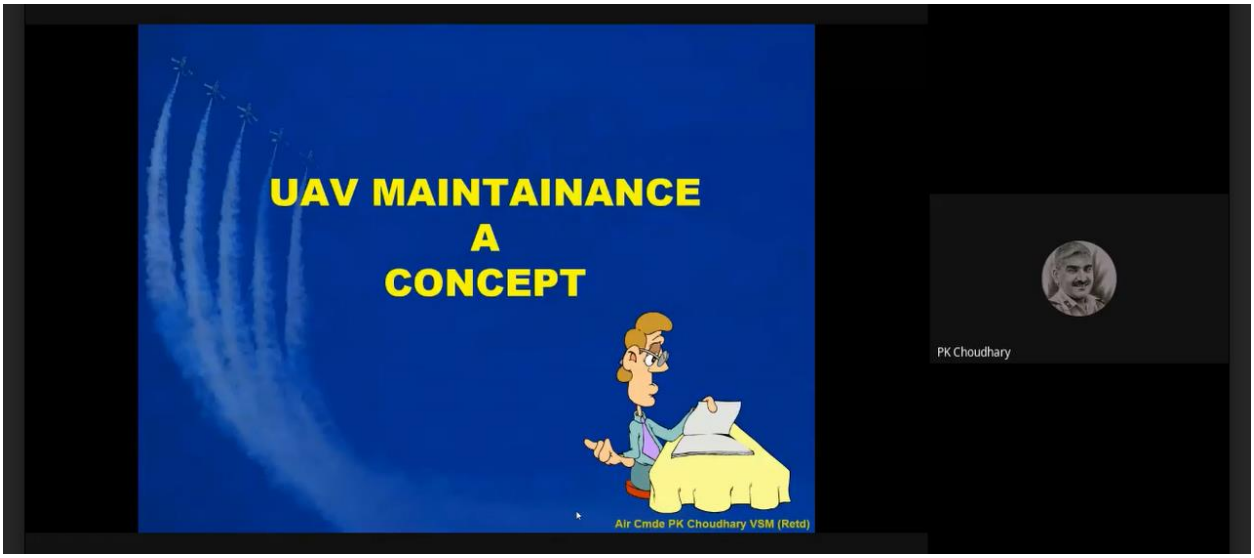
Session III Screenshots: Speaker: Air Commodore P. K. Choudhary VSM (Retd.)

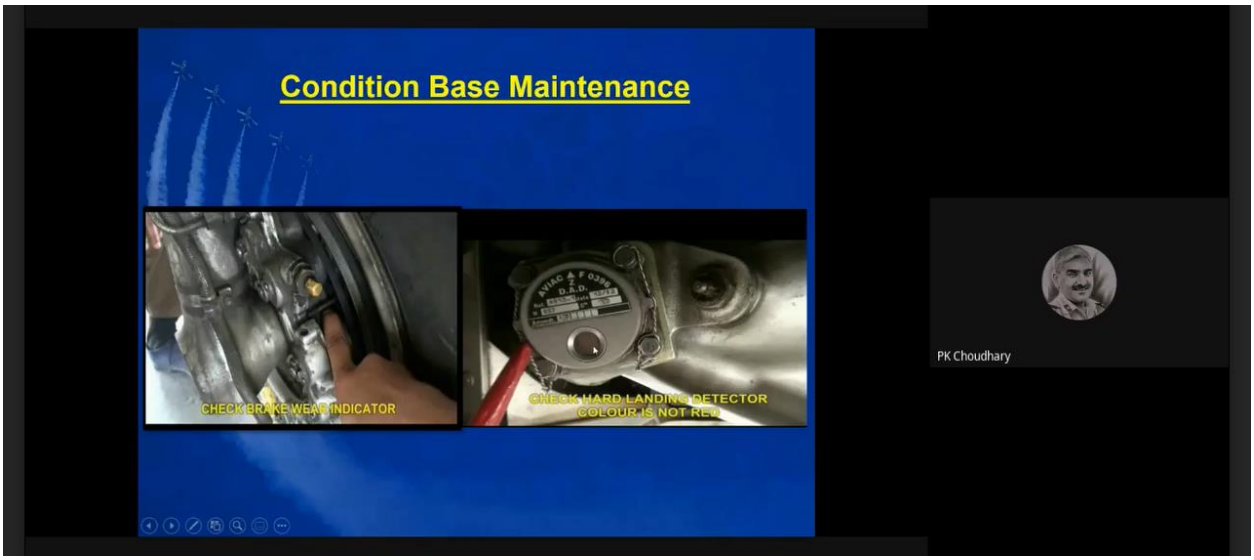


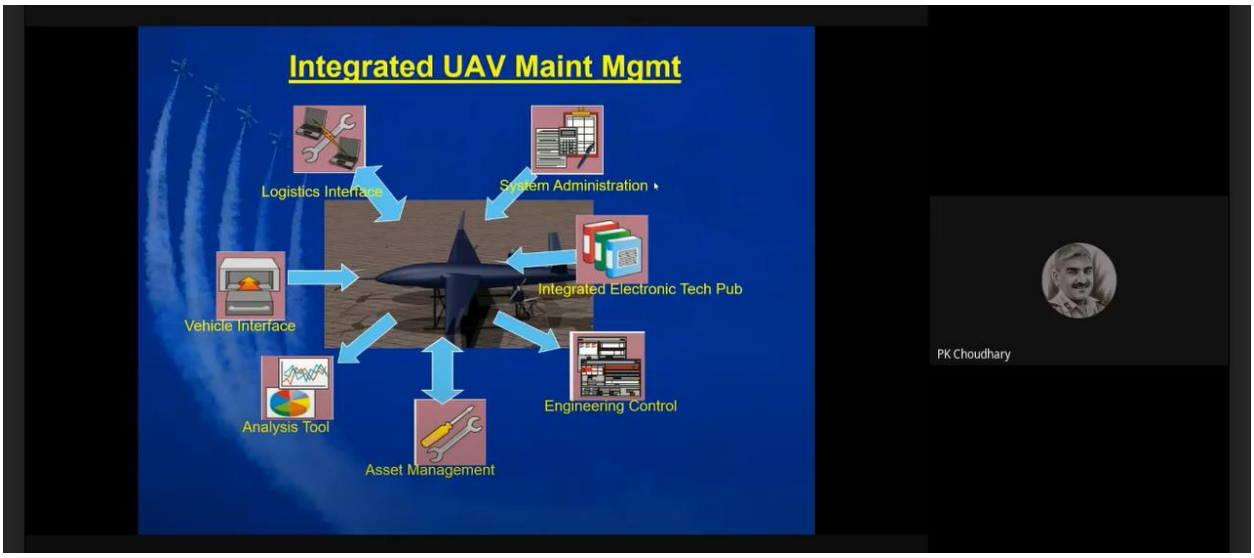




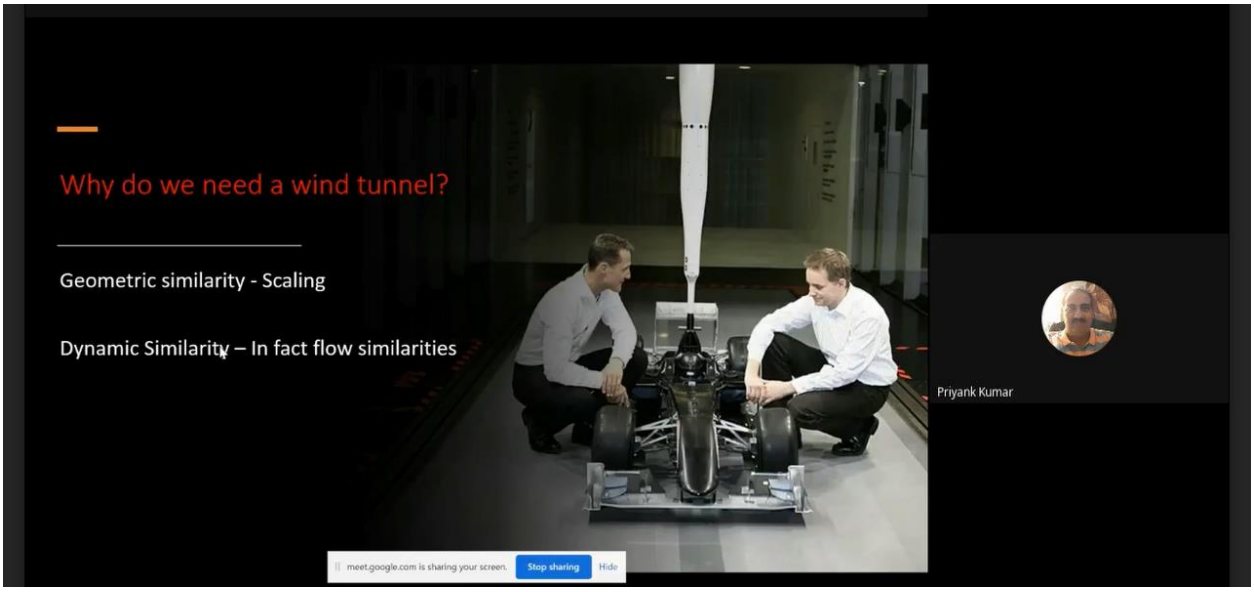
Session IV Screenshots: Speaker: Air Commodore P. K. Choudhary VSM (Retd.)

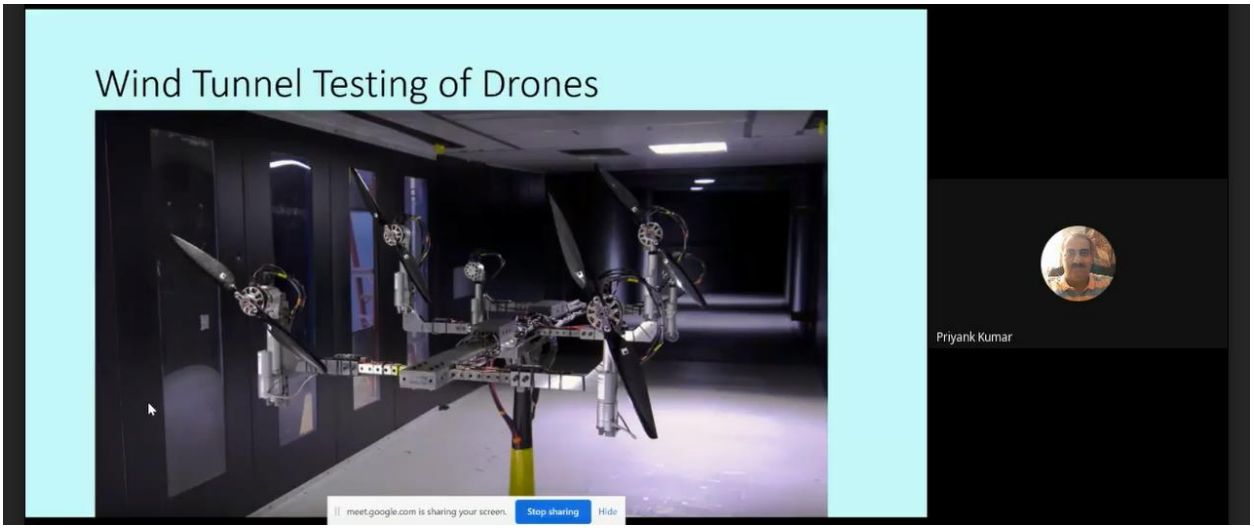


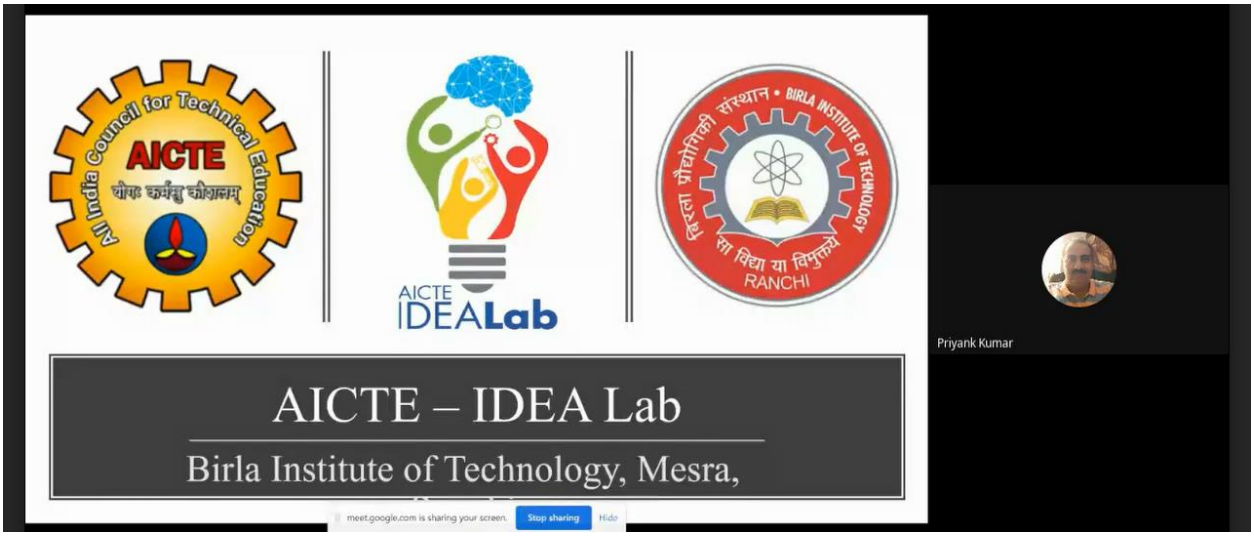




Session V Screenshots: Speaker: Dr. Priyank Kumar







List of Participants

Sl. No.	Full Name	Institute Roll No	Institute Email Id
1	Gaurav Kundara	BTECH/25069/19	Btech25069.19@bitmesra.ac.in
2	NITISH KUMAR	MGI/10010/20	mgi1001020@bitmesra.ac.in
3	Mariya Sunil	MGI/10007/20	mgi10007.20@bitmesra.ac.in
4	ROHIT AGRAWAL	PHD/ME/10004/20	phdme10004.20@bitmesra.ac.in
5	Joy Chakraborty	MTRS/10004/21	mtrs10004.21@bitmesra.ac.in
6	Aditya Sharma	MT/SER/10001/20	mtser10001.20@bitmesra.ac.in
7	SWATI SINGH	MGI/10006/20	mgi10006.20@bitmesra.ac.in
8	Harsh Sarve	BTECH/10607/20	btech10607.20@bitmesra.ac.in
9	Aniket Shandilya	BTECH/10318/20	btech10318.20@bitmesra.ac.in
10	Jaydeep Hanmant Kole	MT/SER/10002/20	mtser10002.20@bitmesra.ac.in
11	Ritika	BTECH/10231/20	btech10231.20@bitmesra.ac.in
12	Samanyu Raina	MT/SER/10024/20	mtser10024.20@bitmesra.ac.in
13	Sanjivani Shivaji Dhonukshe	MT/SER/10009/20	mtser10009.20@bitmesra.ac.in
14	Yashodip Sonawane	MT/SER/10022/20	mtser10022.20@bitmesra.ac.in
15	Sumukhi Mahesh Deodhar	MT/SER/10023/20	mtser10023.20@bitmesra.ac.in
16	Moupriya Ghosh	BTECH/10608/20	BTECH10608.20@bitmesra.ac.in
17	Damini Sarma	MGI/10007/21	mgi10007.21@bitmesra.ac.in
18	Ansh Trivedi	BTECH/10395/20	btech10395.20@bitmesra.ac.in
19	Anuj Singh	BTECH/10393/20	btech10393.20@bitmesra.ac.in
20	Anurag pathak	BTECH/10269/20	pathak.anurag1234@gmail.com
21	Vibhanshu Saurav	BTECH/10684/20	btech10684.20@bitmesra.ac.in
22	Prabhan Jha	BTECH/10745/20	btech10745.20@bitmesra.ac.in
23	Aditya kumar	BTECH/10249/20	btech10249.20@bitmesra.ac.in
24	Shubham Mishra	BTECH/10175/19	btech10175.19@bitmesra.ac.in
25	Somya Garg	BTECH/10554/19	somyagarg48@gmail.com