

LUMEN

About the Society:

LUMEN is the society of Department of Physics and Electronics, Hansraj College, Delhi University. The vision and mission solely focuses on working together with extraordinary minds, giving life to the creative ideas and executing the possibilities we create. LUMEN mainly focuses on enhancing the practical significance of pure sciences. We aim at striking a balance between celebrating the beauty of pure science, exploring the various realms of Physics, appreciating the wide applications of electronics and at the same time keeping the students abreast with the advancements and demand of the recent times, thereby making them aware of the various fields they could explore. LUMEN strongly conforms to the belief of effective communication and greater interaction with the students is the key to realizing our goals. *To raise new questions, new possibilities, to regard old problems from new angles, requires new imagination and marks real advance in science* – By Sir Albert Einstein. This quote aptly describes the spirit of LUMEN, which focuses upon developing a questioning temperament among students by encouraging them to ask the right questions and eventually learn by finding answers to these questions. In addition, we have our annual magazine, *Phyonics* which is a platform to promote various creative and academic activities of the students.

Conveners: Dr. Mamta Saini, Dr. Chetana Jain

Co-convenor: Mr. Dibyajyoti Das

Student members:

President: Harshita Agarwal – B.Sc. (H) Physics, III Year

Vice President: Shiksha Sabharwal – B.Sc. (H) Electronics, III Year

Secretary: Ananya – B.Sc. (H) Physics, II Year

Joint Secretary: Naveen Vashistha – B.Sc. (H) Electronics, II Year

Technical Head: Md Saad – B.Sc. (H) Physics, II Year

Editor: Ananya Yadav – B.Sc. (H) Physics, II Year

Co-editor: Shashwat Khattar – B.Sc. (H) Electronics, III Year

Report of events:

Event 1 (Online): National Science Week - 25 – 28 February 2021

As part of the National Science Week, LUMEN conducted its maiden day talk on

the topic “Innovation and Research at Undergraduate Level” by Prof. Pankaj Tyagi from Cluster Innovation Centre, University of Delhi on 25th February 2021. It was an intriguing event, where speaker explained the differences between research and innovation. He stressed the need to pose each problem differently in order to help students to learn innovatively and to articulate their scientific imagination into the physical world. We conducted *Breaking Bounds*, The Project Presentation Competition on February 26, 2021. It was an open-themed project presentation competition. The project on inverse square law, Umesh Jangra (B.Sc. (H) Physics I year, Hansraj College) was judged first. On 27th February 2021, we organized *Tark Vitark* - The debate competition. The topic of the debate was – ‘This house believes that physics has not reached the limits of possibilities we can discover.’ The topic enabled the students to read about different avenues of science and to holistically present their point of view. The thoughts of the dedicated participants compelled the audience to think differently and made them wonder about some things. The debate competition had participation from various colleges and institutions who participated in pairs having one member speaking in favour of the motion and the other member speaking against the motion. On 28th February 2021, LUMEN successfully completed the series of events of the Science week with *Fit in Physicist* as the final event. The event was a presentation competition where participants fitted into the character of a well-known physicist and explained their most celebrated work. Participants also described the journey of the Physicists, their inspirational life story, their breakthroughs and their contributions to the development of Physics. Each participant was allotted a time slot of 7-8 minutes for presenting everything through presentations and verbal explanation.

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HANSRAJ COLLEGE

is glad to announce
SCIENCE WEEK 2021 : to celebrate the national science day!

Let the seeds of science spread the branches of knowledge everywhere
C.V. Raman

- # Event 1: February 25, 2021
Talk by Prof. Pankaj Tyagi on Innovation & Research at undergraduate level.
- # Event 2: February 26, 2021
Breaking Bounds: An open theme Project Presentation competition.
- # Event 3: February 27, 2021
Tark Vitark: The Debate competition
- # Event 4: February 28, 2021
Fit in Physicist: A presentation competition to become the physicist of your choice.

For any queries contact
Harshita Agarwal - +91 96537 44209
Shikha Sabharwal - +91 98111 94870

Teacher Incharge
Dr. Maya Verma

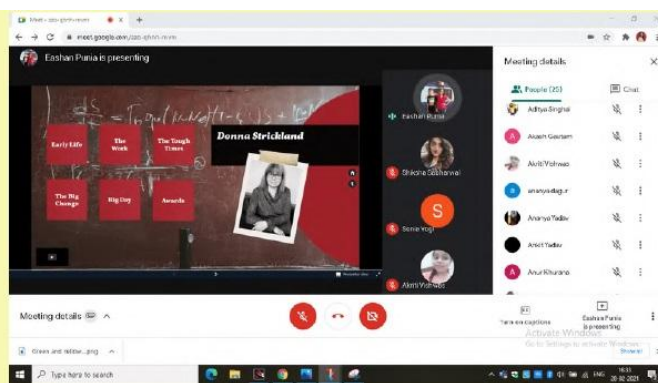
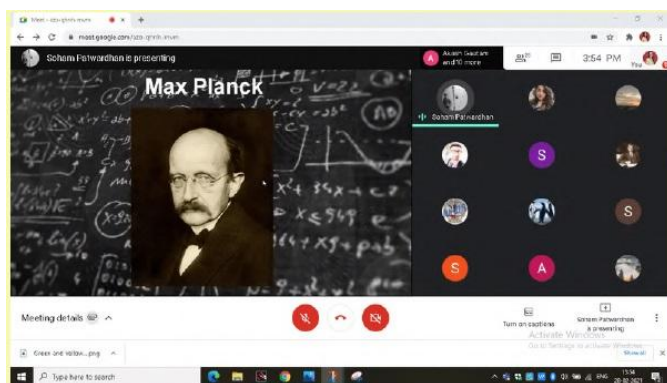
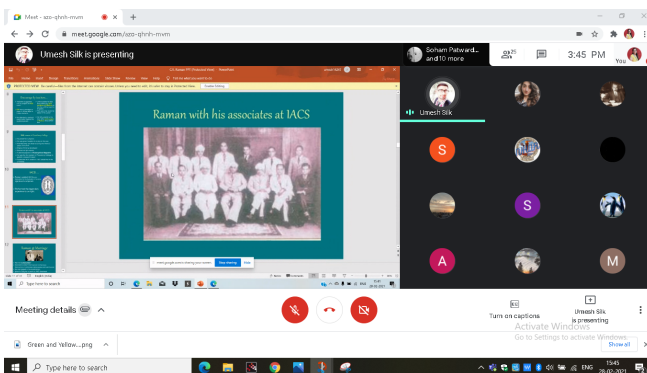
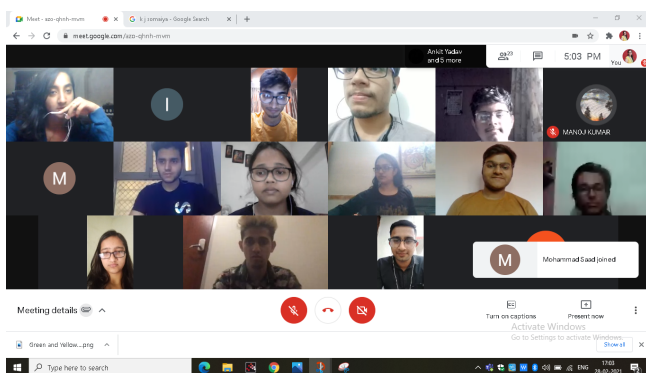
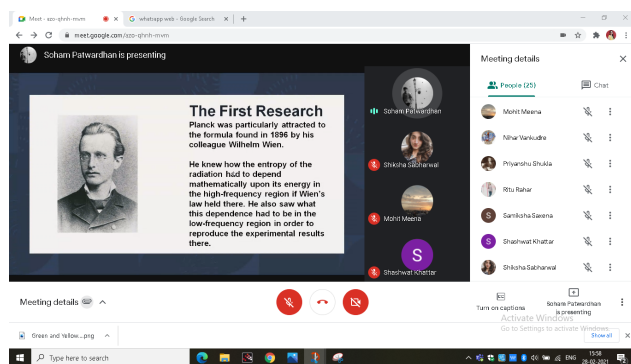
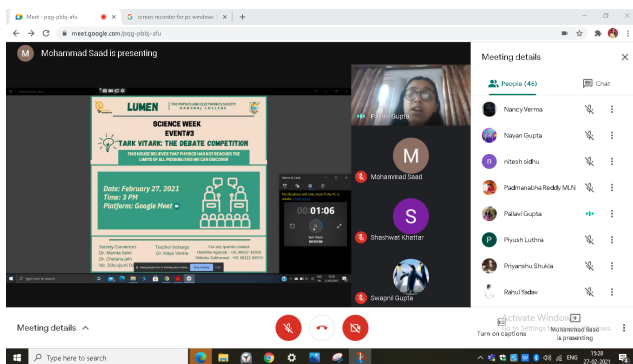
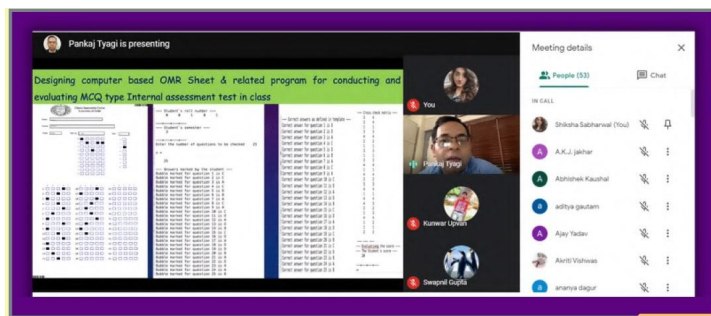
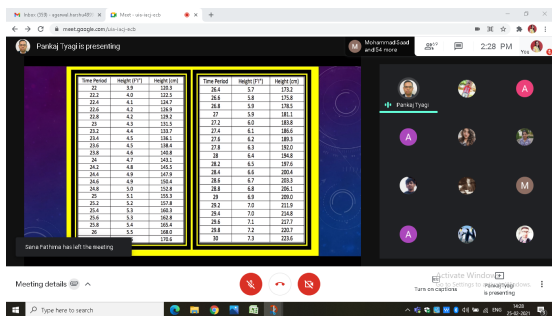
Society Convenors
Dr. Mamta Saini
Dr. Chetana Jain
Mr. Dibyajyoti Das

Meeting details: Pankaj Tyagi is presenting

Playing with Numbers

$321-123=198$	$4321-1234=3087$	
$654-456=198$	$6543-3456=3087$	
$987-789=198$	$9876-6789=3087$	
$98-89=9$	$65-56=9$	$54321-12345=41976$
$87-78=9$	$54-45=9$	$98765-56789=41976$
$76-67=9$	$32-23=9$	$76543-34567=41976$
$21-12=9$	$10-01=9$	Do you see any pattern here?

Meeting details: 2:34 PM



Event 2 (Online): Workshop on Physics Unplugged - 13th February 2021
 Aiming to develop curiosity and a keen interest in physics, LUMEN organized a virtual workshop - Physics Unplugged on MS Teams on 13th February 2021. It was

conducted by Dr. Mamta Saini, Dr. Chetana Jain and Mr. Dibyajyoti Das. Discussions and detailed video explanations were held on all the topics, ranging from mechanics, sound and acoustics, to electromagnetic radiations. Experimental proof of inverse square law using household materials was demonstrated. An insight of wifi detector, light intensity detector, inelastic collisions and oscillations was given by using common mobile application. Students were encouraged to imagine, explore and innovate by making projects. A positive response from the students marked it as another successful event of the session. Some of the projects based on the topics covered during the workshop were, *Simple Pendulum* by Rahul Singh (B.Sc. (H) Physics I year); *Rotation* by Priyanshu Shukla (B.Sc. (H) Physics I year) and Magnetism by Aditya Singhal (B.Sc. (H) Physics I year)

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HANSRAJ COLLEGE

We are glad to announce an online workshop

PHYSICS UNPLUGGED

Let us understand some aspects of radio astronomy, mechanics, electromagnetism through fun activities.

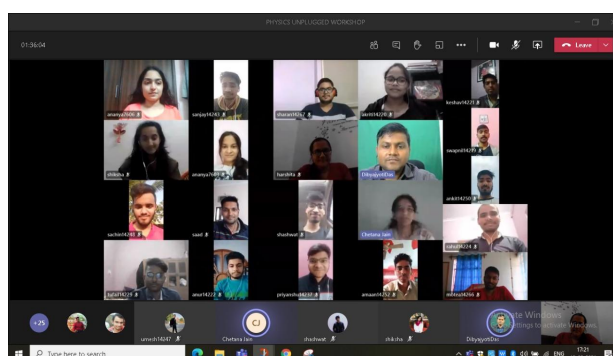
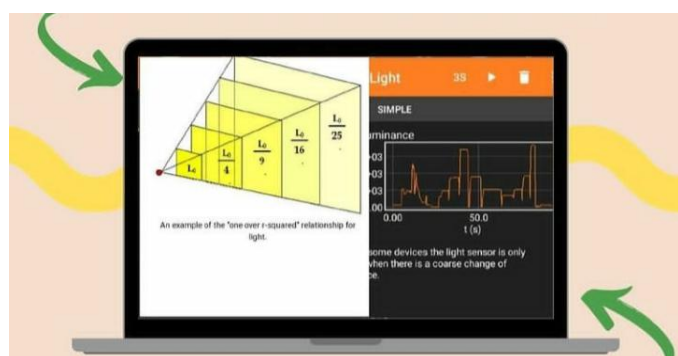
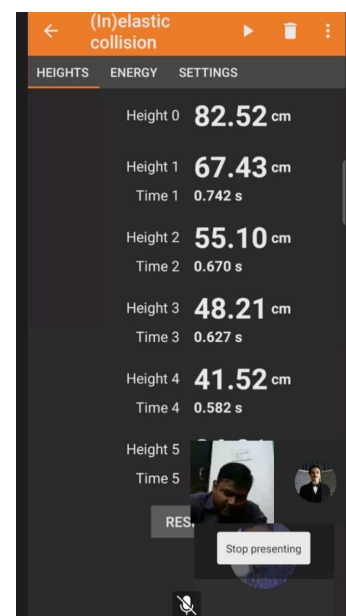
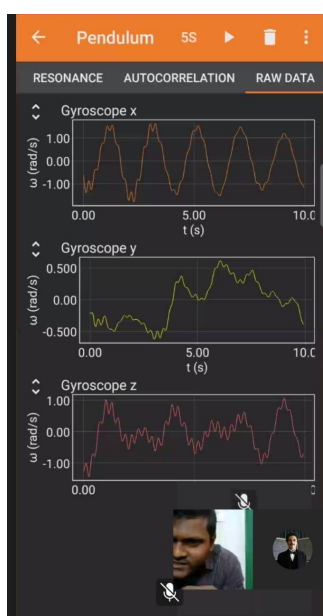
Date: 13th February 2021
Time: 10:00 A.M.
Platform: MSTeams

REGISTER NOW!

Society Convenors
Dr. Mamta Saini
Dr. Chetana Jain
Mr. Dibyajyoti Das

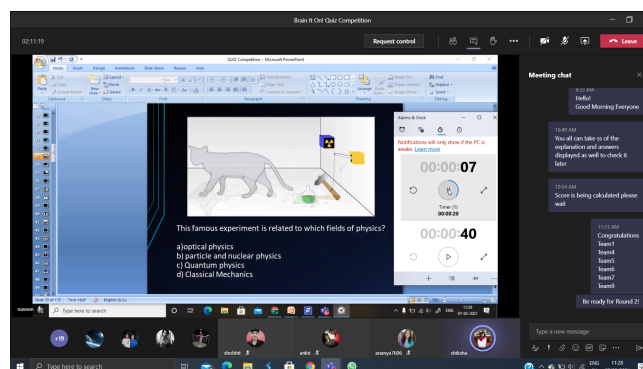
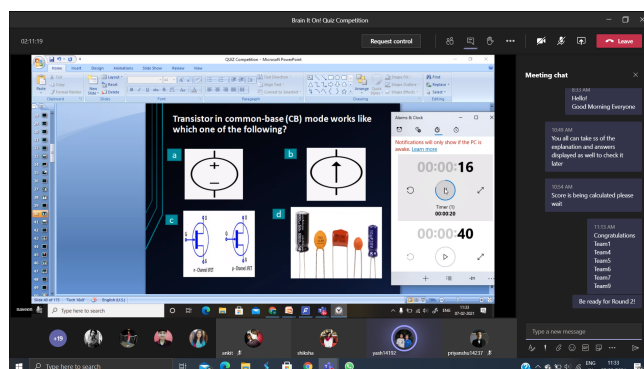
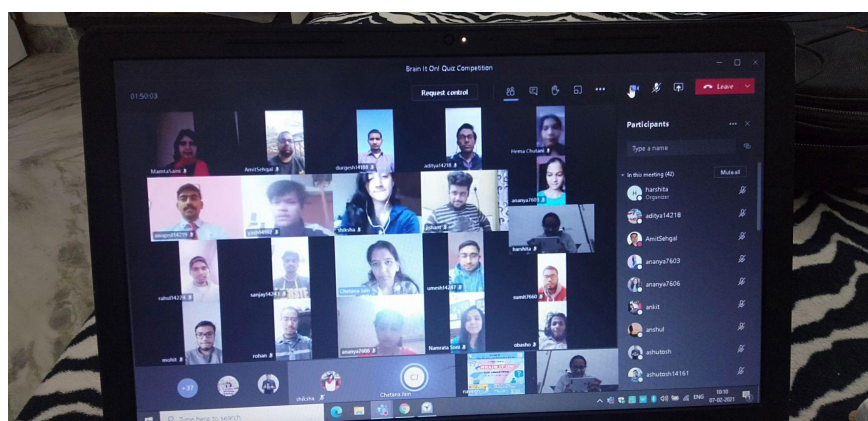
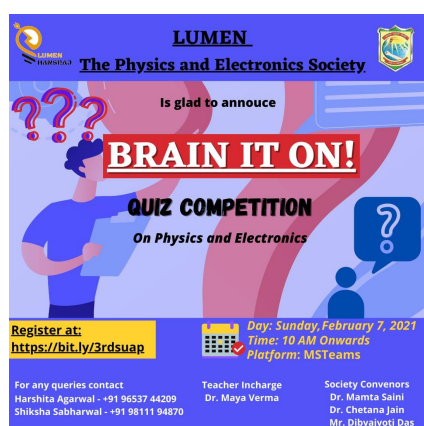
Teacher Incharge
Dr. Maya Verma

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Shikha Sabharwal - +91 98111 94870



Event 3 (Online): Quiz competition - BRAIN IT ON! - 7th February 2021
LUMEN organized its first competition for the academic session 2020-21 on February 7, 2021. It was a quiz named '*Brain it on!*' which tested the grip of the

students on the concepts of Physics and Electronics they had learnt so far. The event was conducted online on Microsoft Teams platform. In total, 10 enthusiastic teams comprising of students pursuing Physics and Electronics participated in this exciting event. The quiz was divided into four rounds namely MCQ round, picture and video based questions round, assertion and reasoning round and the rapid fire round. Every round was an amalgamation of questions from both Physics and Electronics. All the participants were instructed about the rules of each round before its commencement. The quiz was an enriching experience for all the participants. The challenging questions and highly competitive nature and conduct of the quiz made the experience even better. The winning team comprised of Swapnil, Aditya and Umesh, all students of first year Physics (H). The runner-up team was from Electronics (H) second year consisting of Harshit, Ankit and Anshul.



Event 4 (Online): Orientation Program for Academic Session 2020 – 2021 - 21st November 2020

On November 21, 2020, LUMEN organized a momentous orientation programme to welcome the newly admitted first year batch. The event was conducted virtually on MS Teams at 9:30 am in the presence of the honourable teachers of the

Department. It commenced with a warm welcome of new members of the Physics and Electronics family followed by melodious Saraswati Vandana, hailing the Goddess of Knowledge and Wisdom. The department teachers wished them good luck for their upcoming academic journey. A brief introduction about the college and the department, course, syllabus and CBCS system followed by the university was given to the students. An overview about different societies in the college and their enrolment process, beneficial information regarding scholarships and competitive exams was also given to the students. After this informative session, ice-breaking activities were there in the row. A general quiz session about the college enabled the students to know interesting and intriguing facts about their college. Pictionary activity brought about many cheerful responses from the first year students. A brainstorming treasure hunt was given as a group activity to the students with the purpose of enhancing their interaction among one another. All the students participated in these fun activities with great zeal, making it one of the most memorable parts of the programme.



LUMEN
The Physics and Electronics Society

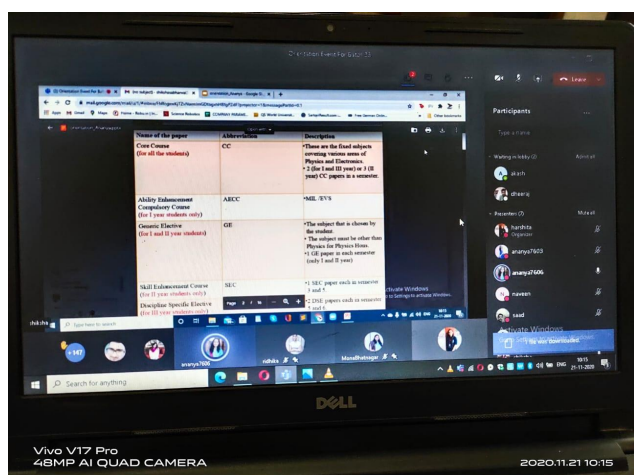
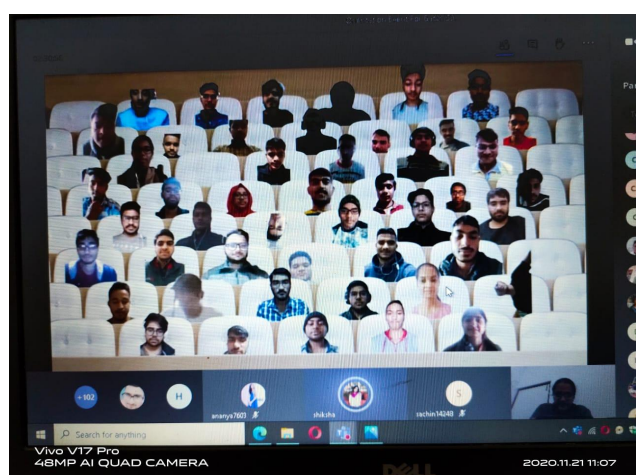
Welcomes all the New Members to the Hansraj Family

Orientation Day and Freshers Welcome Academic Session 2020-21

<https://bit.ly/2IPq1CD>

Day: Saturday, 21st November 2020
Time: 9:30 AM Onwards
Platform: MSTeams

Student Coordinators: Harshita Agarwal - President, Shiksha Sabharwal - Vice President
Teacher Incharge: Dr. Maya Verma
Society Incharge: Dr. Mamta Saini, Dr. Chetana Jain, Mr. Dibyajyoti Das
Principal Ma'am: Prof. Rama



Event 5 (Online):

Webinar on Aerial Robotics and Unmanned Systems - 10th October 2020

In its inaugural event, LUMEN brought an amazing opportunity for students to learn about drones and how they'll be a significant part of our lives in the near future. Event began with a warm welcome of our speaker Lt. Cdr. John Livingstone, former UAV external pilot in the Indian Navy. He is the Founder CEO and Product Architect at Johnnette Technologies Pvt. Ltd. as well as the Founder and Executive Director at the Indian Institute of Drones. His expertise in the subject of drones is unparalleled and we were extremely fortunate to have him as our speaker. He elucidated about how the invention and evolution of drones, how they are made and how do they work; the different types of UAVs, the advancements in drone technology and the different applications a drones.

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HANSRAJ COLLEGE

presents a webinar on
AERIAL ROBOTICS AND UNMANNED SYSTEMS

Saturday, 10th October 2020
3:00 p.m. to 4:00 p.m.
Platform: Microsoft Teams

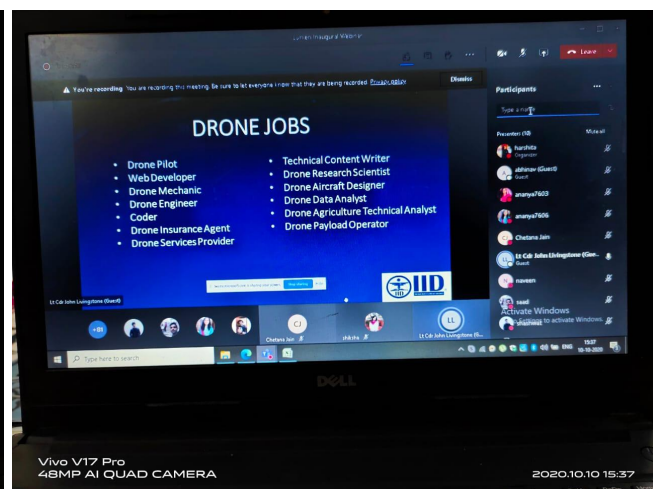
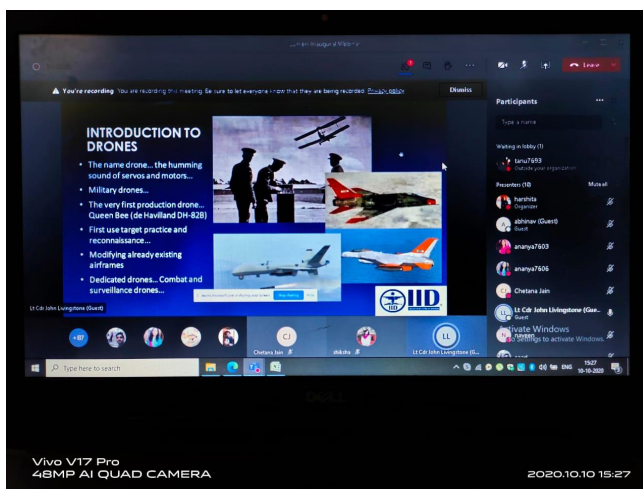
John Livingstone
Founder CEO & Product Architect, Johnnette Technologies Pvt Ltd.
Founder & Executive Director, Indian Institute of Drones
Former UAV External Pilot, Indian Navy.

Register At: <https://bit.ly/34CLMwy>

Student Coordinators
Shiksha Sabharwal : 9811194870
Mohammad Saad : 7270871800

Teacher Incharge
Dr. Maya Verma

Faculty Coordinators
Dr. Mamta Saini
Dr. Chetana Jain
Mr. Dibyajyoti Das



Awards and achievements in the academic year 2020-21 (1st July 2020 to 30th June 2021)

- **Yash Arya – B.Sc. (H) Physics III year**
Bronze honour in International Astronomy and Astrophysics Competition 2020 (Certificate issued on 27th July 2020)
- **Jishant Talwar – B.Sc. (H) Physics II year**
 - (a) Research paper on "Stellar and Pulsar Classification using Machine Learning" published in the research journal "Hans Shodh Sudha", 2021, Vol. 1, Issue 4
 - (b) In recognition of provisional discovery of Main Belt asteroid 2021 GQ52, by International Astronomical Search Collaboration during April 5 -30, 2021
 - (c) Silver Honour in International Astronomy and Astrophysics Competition 2021 (Certificate issued on 5th July 2021)
- **Pratham Ahuja – B.Sc. (H) Physics II year**
 - (a) In recognition of provisional discovery of Main Belt asteroid 2021 GQ52, by International Astronomical Search Collaboration during April 5 -30, 2021
- **Kumar Keshav – B.Sc. (H) Physics I year**
 - (a) Secured first position in essay writing completion organized by IIT Delhi on 19th April 2021
- **Priyanshu Shukla – B.Sc. (H) Physics I year**
 - (a) Silver Honour in International Astronomy and Astrophysics Competition 2021 (Certificate issued on 5th July 2021)

Photographs



Dr. Mamta Saini



Dr. Chetana Jain



Mr. Dibyajyoti Das

