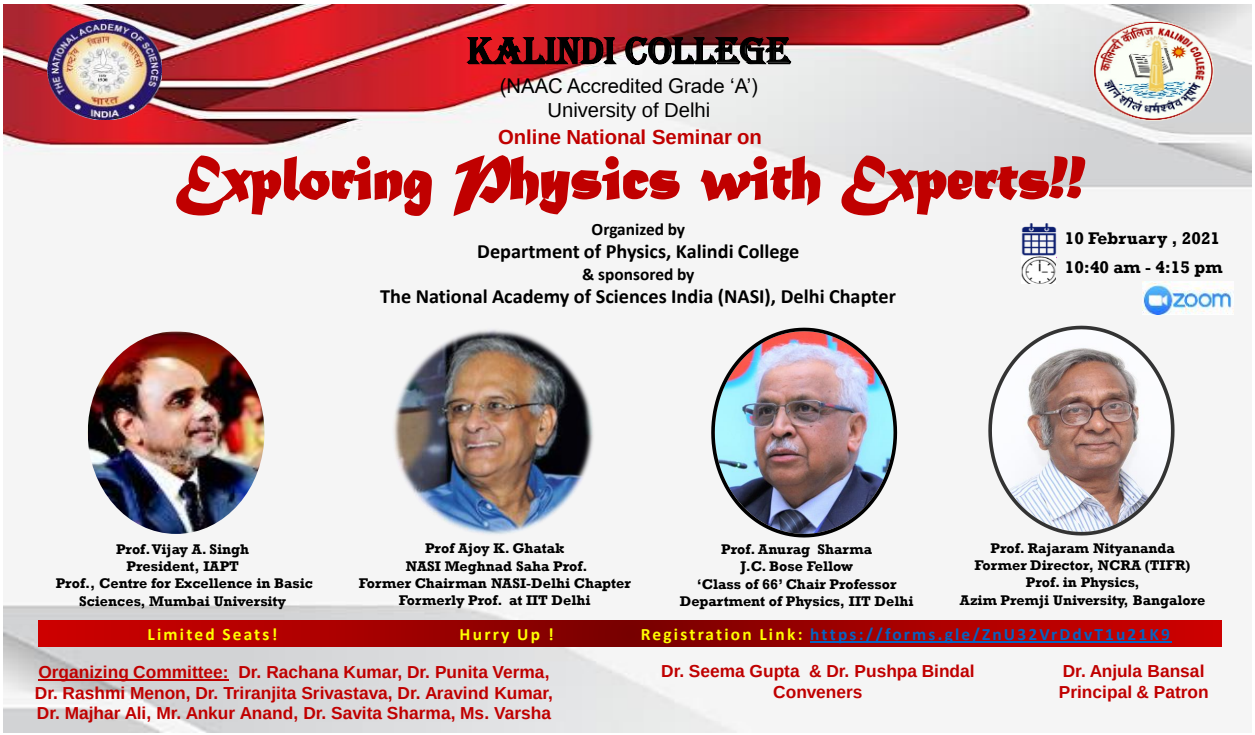
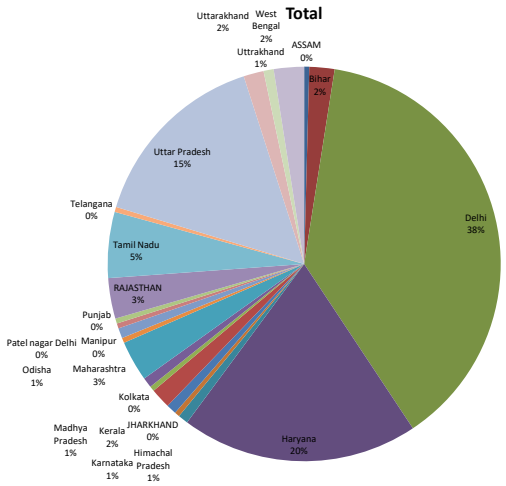
Report of online National Seminar on

"Exploring Physics with Experts!!"



An online one day National Seminar on **"Exploring Physics with Experts"** was held on 10th February 2021. This seminar was organized by the Department of Physics, Kalindi College, University of Delhi, with sponsorship by NASI DELHI CHAPTER, under the convenership of Dr. Seema Gupta, T-I-C and Dr. Pushpa Bindal, Department of Physics, Kalindi College. The organizing committee members were Dr. Rachana Kumar, Dr. Punita Verma, Dr. Triranjita Srivastava, Dr. Rashmi Menon, Dr. Mazhar Ali, Dr. Aravind Kumar, Mr. Ankur Anand, Dr. Savita Sharma and Ms. Varsha. The seminar was beneficial for faculty as well as students of Physics all over India.

In total, 177 candidates from different parts of India participated in the seminar. Out of which 39 were faculty members and 138 were students (97 from Kalindi College and 41 from outside).



This National Seminar aimed to discuss the basic concepts in detail which are used by the different university courses in teaching physics to any course.

The Seminar started with the inaugural address of Prof. Ajoy K Ghatak, Prof. Meghnad Saha Fellow of NASI, followed by Prof. Anurag Sharma, Chairman NASI DELHI CHAPTER, on **10th February 2021** at 10:40 AM. They explained that how important it is to have a clear vision on basics. Prof. Ajoy K Ghatak welcomed the participants and appreciated the seminar. The Conveners Dr. Seema Gupta and Dr. Pushpa Bindal welcomed Prof. Ajoy K Ghatak for his talk on **The Fiber Optics Revolution**. The following 4 sessions were conducted:

Session 1
The Fiber Optics Revolution

(https://youtu.be/RSFZSC7Z0zo and https://youtu.be/HLroSaAwtqo **)**

Resource person: Prof. Ajoy K Ghatak, NASI Meghnad Saha Distinguished Prof. (Formerly Prof. of Physics at IIT Delhi)

Prof. Ajoy Ghatak started the session with the point that why study of light has become so important. Starting from the development of first laser, Prof. Ghatak discussed the properties of Lasers and it's different applications. He also covered a wide range of topics in fibre optics including optical fibre, laser induced fusion, optical tweezers, chirped pulse amplification and LIGO etc. He also enlightened us about solar light optical lighting process which is very useful to the regions where electricity crisis exists.

Session 2
Four Faces of Entropy

(https://youtu.be/RSFZSC7Z0zo and https://youtu.be/HLroSaAwtqo **)**

Resource person: Prof. Rajaram Nityananda, Former Director, NCRA (TIFR), Prof. in Physics, Azim Premji University, Bangalore

Prof. Rajaram Nityananda begin his talk by explaining the topic relevance in the field of Statistical Physics, Thermal Physics, Communication Systems. He gave every basic idea about bits, Shannon entropy, the mathematical theory of communication, Boltzmann entropy, Clausius-Carnot Entropy, irreversible expansion etc.

Session 3
Concepts in Optics

(https://youtu.be/uY3aC8IjaXY **)**

Resource person: Prof. Anurag Sharma, J.C. Bose Fellow, 'Class of 66' Chair Professor, Department of Physics, IIT Delhi

Prof. Anurag Sharma started his talk on fundamentals of optics, Fermat principle, Huygens principle, Huygens-Fresnel principle. He also talked about the evolution of physics in optics from early to modern theory. Everyone appreciated his presentation.

Session 4
The Golden Ratio, the Centre of Mass and Aesthetics

(https://youtu.be/Z-JO8QvbL8g **)**

Resource person: Prof. Vijay A. Singh, President, IAPT, Prof., Centre for Excellence in Basic Sciences, Mumbai University

Prof. Vijay A. Singh started his talk on history of mathematics, Indian origin of mathematics, various examples of golden ratio in arts to science. He also gave many examples of physics problems contains golden ratio in circuits, bohr's quantization, center of mass etc. He very beautifully explained the concept of Fibonacci Sequence and Golden ratio being used all around us in nature, architecture, human body and various traditional designs and paintings. The famous painting of Mona Lisa by Leonardo da Vinci is a great such example. This session was very well enjoyed and appreciated by all the participants.

Valedictory session

(https://youtu.be/Z-JO8QvbL8g?t=3956)

Dr Pushpa Bindal and Dr Seema Gupta gave vote of thanks at last of the session to all the Resource person and Team members for the successful completion of the workshop.

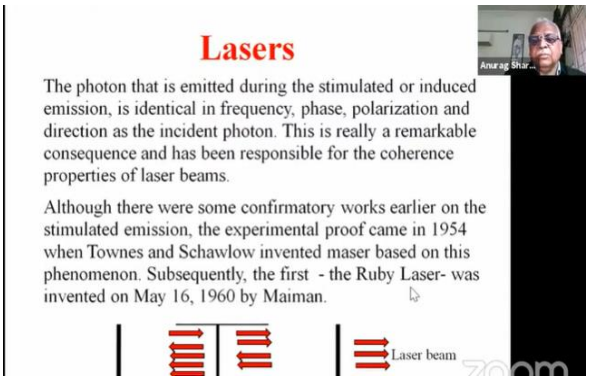
Formal closure of the program is followed by group pictures.

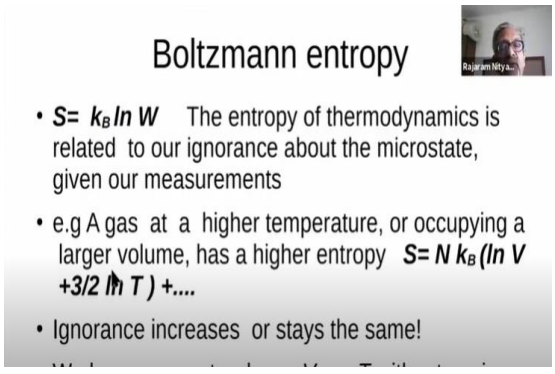
Feedback from participants

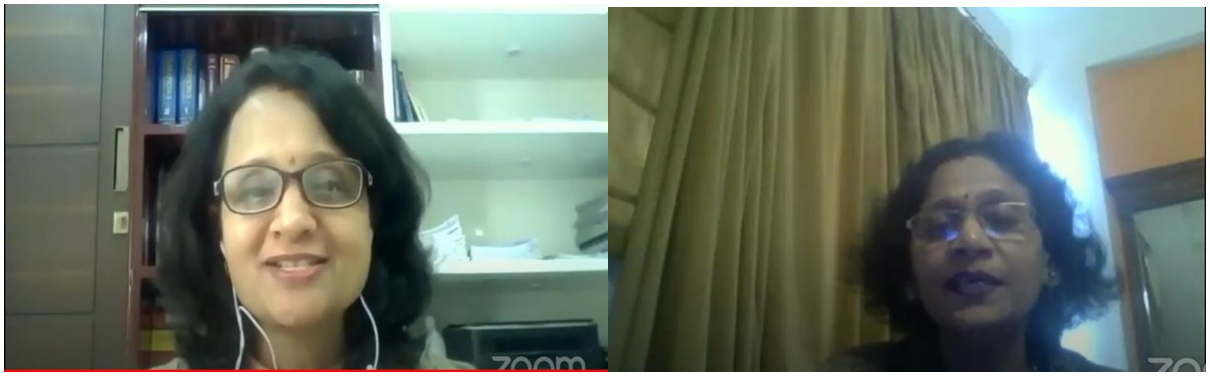
The feedback form is collected from the participants on google form (total-173 entries) and the summary of responses is as followed

Questions asked	Responses
Was the session useful for you?	Very useful – 132 Useful - 41
Did the session meet your expectation?	High – 142 Moderate - 31 Low – Nil
Did today's session help with new learning or knowledge?	High – 141 Moderate - 30 Low – 2
Overall how satisfied are you with the session?	Very Satisfied – 129 Satisfied - 44

Most of the audience has appreciated the event and they has expressed the wish that more such events must happen, large audience has reflected positive gestures for our initiative.








View
Dr. Seema Gupta
NASI Learning Phy...
Punita Verma
Pushpa Bindal
Dr Arvind Kumar
Rachana Kumar
Dr. Monika Gupta
Majhar Ali
Lavish Kumar
Kanchan
Sakshi Gupta
Komal Jindal
Vanshika Singh
Soumyajit Biswas
Dr. Savita Sharma
27_diksha
Dr. Monika Bassi
Mansi Mann
NIDHI VASHISHTA
Arya Gouri
Mansi Gupta
26_shweta_loshali
E. NARAYANAN
14_Amita Pilania
20_Prachi Kadiy...
1/3
1/3
Unmute
Start Video
Security
Participants
61
Chat
2
Share Screen
Record
Reactions
More
End

Organizing Committee

Dr. Triranjita Srivastava

Dr. Rashmi Menon

Dr. Majhar Ali

Dr. Aravind Kumar

Mr. Ankur Anand

Ms. Varsha