



Koneru Lakshmaiah Education Foundation

(Deemed to be University estd. u/s. 3 of the UGC Act, 1956)

Accredited by NAAC as 'A' Grade University ♦ Approved by AICTE ♦ ISO 9001-2015 Certified

Campus: Green Fields, Vaddeswaram - 522 502, Guntur District, Andhra Pradesh, INDIA.

Phone No. 0863 - 2399999; www.klef.ac.in; www.klef.edu.in; www.kluniversity.in

Admin Off: 29-36-38, Museum Road, Governorpet, Vijayawada - 520 002. Ph: +91 - 866 -2577715, Fax: +91-866-2577717.

Department of PHYSICS

DATE: 28/08/2024

Report on the National Virtual Webinar titled “Subluminal Light in Optical Media” organised by the Dept. of Physics, KLEF, Vaddeswaram, India on 28/08/2024 from 2:00 to 4:00 pm.

The Resource Person started at exactly 2 pm, and I waited a few minutes to join the remaining participants. The session began with the Convenor (Dr Sonali Biswas) addressing the participants, followed by the RPAC Madam, who briefly highlighted the department (Academics and Research) to the participants and resource person. After this, we immediately started the presentation with our resource person giving their introduction to the participants. The resource speaker, Dr Nitu Borgohain, Assistant Professor, Department of Physics, University of Science and Technology, Meghalaya, delivered the lecture showcasing the importance of slow light, and he explained that the slow light effect is important in science and technology because it can improve light-matter interactions and miniaturize photonic devices. It also allows for more control over the spectral bandwidth of light-matter interactions, and the ability to temporarily store light in all-optical memories. Dr Nitu Borgohain discussed key concepts, recent advancements, and prospects in the slow light. Dr Nitu Borgohain highlighted the significance of Slow Light, which utilizes control over the spectral bandwidth of light-matter interactions, and the ability to temporarily store light in all-optical memories. Dr Nitu also explained some potential applications of the slow light effect: Optical communications, Optical signal processing, and Interferometric devices.

The seminar ended with a vote of thanks from the Convenor (Dr Sonali Biswas), who finally requested the participants to fill out the feedback form, which the link shared in the WebEx chat box to generate and receive their e-certificates. With this, the guest lecture ended on a grand note and successfully held 40 participants online throughout the duration, which went for about 1 hour and 10 minutes.

Information was communicated on 21/08/2024 to get registrations from the participants, and the same was shared with the previous participants through WhatsApp, email and other social media platforms.

The Department of Physics (DST-FIST Sponsored), KLEF, Guntur organised a **National Virtual Webinar titled “Subluminal Light in Optical Media”**.

The details are as follows:

Topic: **National Virtual Webinar**

Date: 28th August 2024 (Wednesday)

Time: 2:00 pm – 4:00 pm (Indian Standard Time)

Online Platform: Cisco WebEx

NO REGISTRATION FEE

Registration Link: <https://forms.gle/NvPEf2Ycdxk4LSJr5>

E-certificate will be provided to the registered participants who submitted feedback forms and attended all the sessions.

Resource Persons:

Dr Nitu Borgohain, Assistant Professor, Department of Physics, University of Science and Technology, Meghalaya.

Join the meeting here:

<https://kluniversity.webex.com/kluniversity/j.php?MTID=m0b6665dfc6575d966a700ed36d8fe6b7>

For any queries on the webinar, the following are contacted.

Dr. Sonali Biswas, Asst. Prof. & Convenor, Dept. of Physics,

Email: biswas.sonali@kluniversity.in, Mobile: 9471304216.

With regards

Program Chair

Dr. K. Swapna, Associate Professor & HOD, Department of Physics, Koneru Lakshmaiah Education Foundation (KLEF), Vijayawada, Andhra Pradesh.

1. Poster designed for communication purposes to conduct Webinar



**National/Virtual Webinar on
SUBLUMINAL LIGHT IN OPTICAL MEDIA**
28th August 2024, 2 PM - 4 PM

Meeting Venue : Cisco WebEx
<https://kluniversity.webex.com/kluniversity/j.php?MTID=m0b6665dfe6575d966a700ed36d8fe6b7>

Speaker :



Dr. Nitu Borgohain
Assistant Professor
Department of Physics
University of Science and Technology,
Meghalaya, Ri-Bhoi, Techno City,
Killing Road, Baridua, Meghalaya 793101

Registration link:
<https://forms.gle/NvPEf2Ycdxk4LSJr5>
No Registration fee and E-certificate will be provided to all participants.

CONVENORS:

Dr. SONALI BISWAS Assistant Professor, Dept of Physics, KLEF biswas.sonali@kluniversity.in +91-9471304216	Dr. S. SHANMUGAM Assistant Professor, Dept of Physics, KLEF shanmugam@kluniversity.in +91-9865258522
---	--

CHAIR :
Dr. K. SWAPNA
Associate Professor & HOD, Dept of Physics, KLEF
swapnaton@kluniversity.in
+91-9652163632

The Department of Physics (DST-FIST Sponsored), KLEF, Guntur organised a National Virtual Webinar titled “Subluminal Light in Optical Media” on 28/08/2024 from 2:00 to 4:00 pm (IST).

Thanks to the CCO & Director, Dean-MHS, Principal-Sciences, Coordinator of FED, HOD (Dept of Physics), and Physics faculty for successfully completing the National Seminar. Special thanks to the management and higher authorities of KLEF, Vaddeswaram, and Guntur.

1. E-Certificates were issued to participants who registered, participated/attended the guest lecture, and successfully submitted the feedback form. A Sample certificate is attached here.
2. Registration and feedback forms and responses from the participants with statistics
Total registrations received: 108

National virtual webinar on "Subluminal Light in Optical Media".

B *I* U [↻](#) [✕](#)

Conducting of national virtual webinar on "Subluminal Light in Optical Media" on 28th August 2024, Department of Physics, KLEF, Vijayawada.

This form is automatically collecting emails from all respondents. [Change settings](#)

Email *

Short answer text

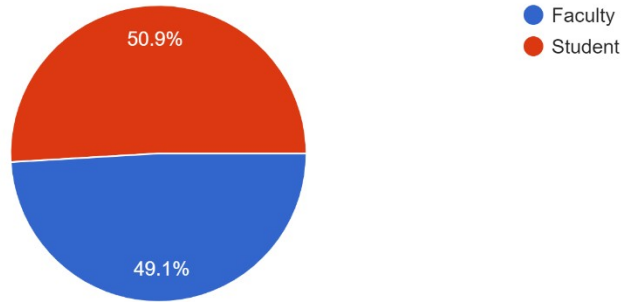
Full Name *

Short answer text



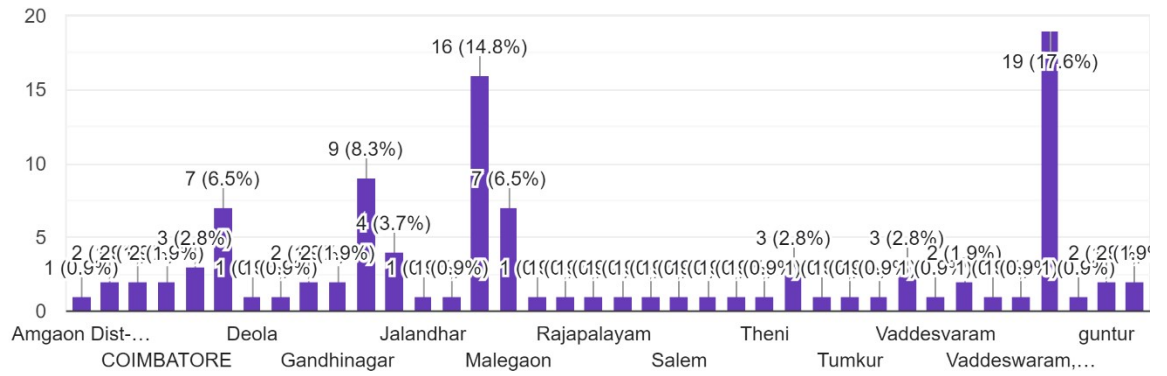
Designation

108 responses



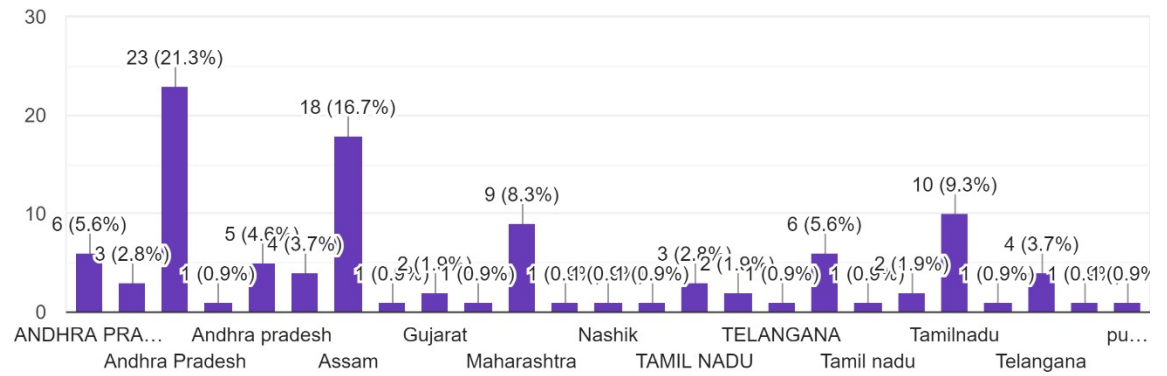
Location / City

108 responses



State

108 responses



3. Screenshots/photos taken during the international webinar are attached below as proof.

National virtual webinar on "Subluminal Light in Optical Media". Meeting Info

01:41:41

Participants (35)

Invite and remind

Participants (35)

Department of physics
Host, me

Dr. Nitu Borgohain
Presenter • Unverified

1919 Dr. K.Swapna

1968 Dr. M Venkateswarlu

3172 Dr.G.Sunitha Sundari

A. Sangeetha
Unverified

Amruta
Unverified

Bhavana sruthi
Unverified

BONDILI SESHARAMSINGH
Unverified

debajit
Unverified

DHARA SATEESH
Unverified

Mute all Unmute all

Viewing Dr. Nitu Borgohain's shared content

100%

Subluminal propagation of light in optical media - Microsoft PowerPoint

National Virtual Webinar
on
Subluminal Light in Optical Media

KL
KARLA UNIVERSITY

UNIVERSITY OF SCIENCE & TECHNOLOGY
Meghalaya
Sustaining Excellence

Dr. Nitu Borgohain
Assistant Professor & Head
Department of Physics
University of Science & Technology Meghalaya

Click to add notes

Mute Stop video Share AI Assistant Record

National virtual webinar on "Subluminal Light in Optical Media". Meeting Info

01:33:26

Participants (35)

Invite and remind

Participants (35)

Department of physics
Host, me

Dr. Nitu Borgohain
Presenter • Unverified

1919 Dr. K.Swapna

1968 Dr. M Venkateswarlu

3172 Dr.G.Sunitha Sundari

A. Sangeetha
Unverified

Amruta
Unverified

Bhavana sruthi
Unverified

BONDILI SESHARAMSINGH
Unverified

debajit
Unverified

DHARA SATEESH
Unverified

Mute all Unmute all

Viewing Dr. Nitu Borgohain's shared content

100%

Applications

Slow light can be used in quantum optical memory.

Spectral sensitivity and resolution of an interferometer can be greatly enhanced by introducing a slow-light medium into it with an enhancement factor equal to the group index of the medium

Beam expander Tunable laser Slow-light medium Beam profiler Imaging lens PC

Fringe movement rate (period/nm)

experimental data

theory for a slow-light medium

theory for a non-dispersive medium

605 602.5 600 597.5 595 592.5 590 587.5
wavelength (nm)

Zhimin Shi et al, Optics Letters 2007

Unmute Start video Share AI Assistant Record

National virtual webinar on "Subluminal Light in Optical Media". Meeting Info

01:40:23

Participants (35)

Invite and remind

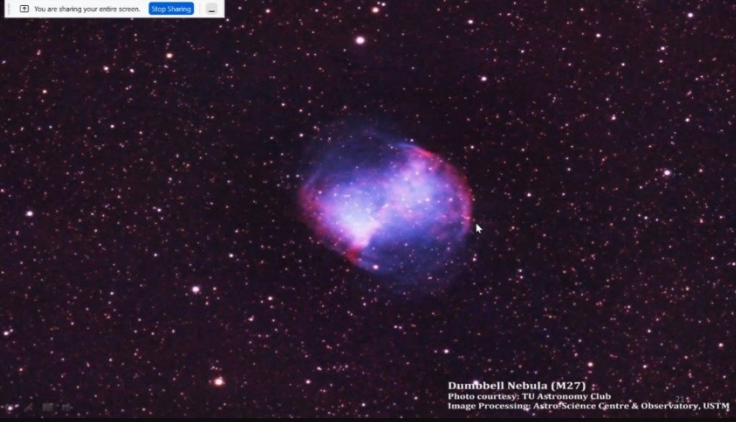
Participants (35)

- Department of physics Host, me
- Dr. Nitu Borgohain Presenter • Unverified
- 1919 Dr. K.Swapna
- 1968 Dr. M Venkateswarlu
- 3D 3172 Dr.G.Sunitha Sundari
- A. Sangeetha Unverified
- Amruta Unverified
- Bhavana sruthi Unverified
- BONDILI SESHARAMSINGH Unverified
- debajit Unverified
- DHARA SATEESH Unverified

Mute all Unmute all

Viewing Dr. Nitu Borgohain's shared content

100%



Dumbbell Nebula (M27)
Photo courtesy: TU Astronomy Club
Image Processing: AstroScience Centre & Observatory, USTM

Unmute Stop video Share AI Assistant Record

14:40 28-08-2024

National virtual webinar on "Subluminal Light in Optical Media". Meeting Info

01:36:40

Participants (35)

Invite and remind

Participants (35)

- Department of physics Host, me
- Dr. Nitu Borgohain Presenter • Unverified
- 1919 Dr. K.Swapna
- 1968 Dr. M Venkateswarlu
- 3D 3172 Dr.G.Sunitha Sundari
- A. Sangeetha Unverified
- Amruta Unverified
- Bhavana sruthi Unverified
- BONDILI SESHARAMSINGH Unverified
- debajit Unverified
- DHARA SATEESH Unverified

Mute all Unmute all

Viewing Dr. Nitu Borgohain's shared content

100%

Advantages of Subluminal Light in Optical Media

- ❖ Slow light could be used to greatly reduce noise.
- ❖ Optical switches can be controlled by slow light.
- ❖ Slowing light could lead to a more orderly traffic flow in networks.
- ❖ Slow light can be used to build interferometers that are far more sensitive to frequency shift.
- ❖ This property can be used to build better, smaller frequency sensors and compact high resolution spectrometers.
- ❖ Slow light can be used in quantum optical memory.

Thank you

15

Stop video (Ctrl + Shift + V)

Unmute Stop video Share AI Assistant Record

14:36 28-08-2024

National virtual webinar on "Subliminal Light in Optical Media". Meeting Info

01:44:09

Participants (36)

Invite and remind

KANIKE RAGHAVENDRA KUMAR

Mohini Nikam

Mr. Jitendra V. Misar

naveen

nidhi

P. Nandini

Parinita Das

PELATI ALTHAF

Pravallika Ch

Sarika Sonawane

satish kumar

Syed nasreen

Mute all Unmute all

Viewing Dr. Nitu Borgohain's shared content

100%

National virtual webinar on "Subliminal Light in Optical Media".

Dr. B. Sivakumar

PELATI ALTHAF

1968 Dr. M Venkateswarlu

P. Nandini

Dr. S. Shanmugan

Syed nasreen

Mute Stop video Share AI Assistant Record

National virtual webinar on "Subliminal Light in Optical Media". Meeting Info

01:52:36

Participants (32)

Invite and remind

Participants (32)

Department of physics

Host, me

Dr. Nitu Borgohain

Presenter • Unverified

1919 Dr. K.Swapna

1968 Dr. M Venkateswarlu

2057 Dr. M V V K Srinivas Prasad

3D 3172 Dr.G.Sunitha Sundari

Amruta

Bhavana sruthi

BONDILI SESHARAMSINGH

BONDILI SESHARAMSINGH

debajit

DHARA SATEESH

Mute all Unmute all

Pravallika Ch

Dr. B. Sivakumar

Dr. mahamuda Shaik

Dr. N. Revathi

Hiramani kalita

DHARA SATEESH

Gottipati Dedeepya

Mohini Nikam

Dr. S. Shanmugan

K Chandrika

Amruta

Kaki Lavanya

BONDILI SESHARAMSINGH

nidhi

debajit

Bhavana sruthi

Mute Stop video Share AI Assistant Record