Best Practice

Report on

Lecture Series by Faculty Members for Teachers & Students

Conducted in Feb – March 2025

Under the auspices of the Physics Society, an initiative was unanimously approved to organize a series of lectures by faculty members for both teachers and students. A total of six lectures were delivered, fostering insightful academic discussions within the department.

Report on Lecture by Dr. S. W. Anwane on Newton-Raphson Method

Report on Lecture by Dr. S. W. Anwane on Newton-Raphson Method

Date of Lecture: 7th February 2025
Speaker: Dr. S. W. Anwane, Head of the Department
Topic: Newton-Raphson Method

Introduction

On 7th February 2025, Dr. S. W. Anwane delivered an insightful lecture on the Newton-Raphson method, a widely used iterative technique for finding roots of real-valued functions. The session provided a detailed explanation of the method, its derivation, and its application using the Maple software, offering both theoretical and practical insights.

Derivation of the Newton-Raphson Method

Dr. S. W. Anwane began the lecture by discussing the foundational concept behind the Newton-Raphson method. The primary aim of the method is to find the root of a function $f(x)=0$, where the function and its derivative are continuous. Dr. S. W. Anwane emphasized that the method is highly efficient, converging rapidly when the initial guess is close to the true root. However, he also highlighted the importance of ensuring that the function $f(x)$ is differentiable, and that the derivative $f'(x)$ is not zero at the root.

Problem Demonstration

Following the derivation, Dr. Anwane demonstrated the Newton-Raphson method by solving an example problem.

Through the iterations, he showed how the method converged rapidly to the root of the equation. Dr.S. W. Anwane also discussed common pitfalls, such as poor convergence or divergence, and how the choice of the initial guess could impact the success of the method.

Application on Maple Software

To further solidify the understanding of the Newton-Raphson method, Dr.S. W. Anwane transitioned to the practical application of the method using Maple software. He demonstrated how the method can be easily implemented in Maple for both symbolic and numerical solutions.

Dr. S. W. Anwane showed how to define the function f(x) and its derivative in Maple, and then use the fsolve function to find the root numerically. He also demonstrated how to visualize the iterative process, plotting the tangent lines and showing the progress of each approximation towards the root.

By running the Newton-Raphson method on Maple, Dr. S. W. Anwane emphasized the power of computational tools in solving real-world problems and how they can save time and effort in comparison to manual calculations.

Conclusion

The lecture by Dr. S. W. Anwane on the Newton-Raphson method was both educational and practical, providing a thorough explanation of the method's theory and applications. The step-by-step derivation of the formula, combined with a hands-on problem-solving demonstration and the use of Maple software, made the session highly engaging and informative.

Dr. S. W. Anwane's expertise in the subject and his ability to connect theoretical concepts with practical tools were evident throughout the lecture. The session helped participants better understand the power of the Newton-Raphson method and how it can be applied effectively to solve problems in various fields, including physics, engineering, and mathematics.

The use of Maple software further enhanced the learning experience, allowing students to visualize and experiment with the method on their own. Overall, the lecture was a valuable learning experience for all attendees.

Acknowledgements

The students expressed their appreciation for the interactive nature of the session and the professor's effective teaching style. The use of Maple software was particularly appreciated for its ability to visually demonstrate complex concepts in an accessible way. Professor S. W. Anwane's ability to address student queries with clarity and depth made the lecture a highly valuable learning experience for all attendees.

Report Prepared by:
Dr. Sarang R. Daf
Assistant Professor (Ad-hoc)
12th February 2025

Lecture feedback form Newton Raphson Method

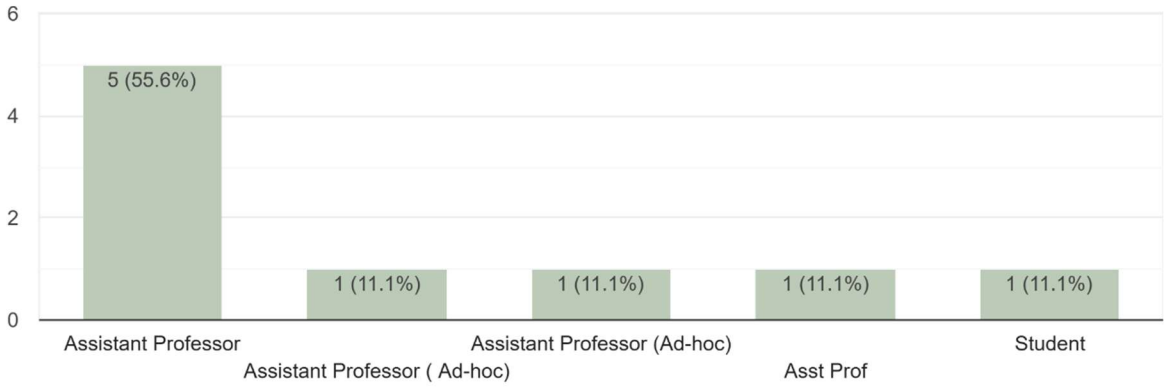
No. Of Responses: 09

Q.1 Name of Participant

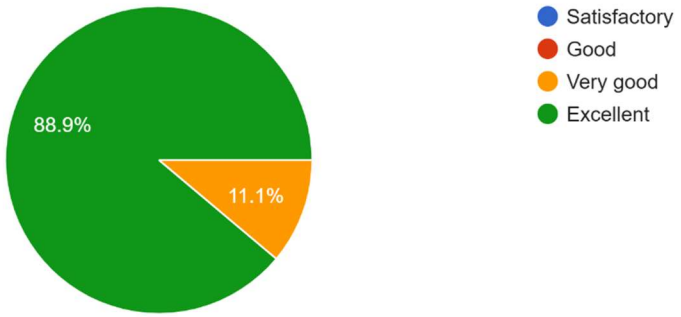
Response:

1. Dr R N Pathare
2. Chanda Prakash Jatgade
3. Yugansh Kanoje
4. Dr. Sarang Ravindra Daf
5. Bhupendra Tikaram Kumbhare
6. Dr. S. V. Khangar
7. Mr. Parag Ankush Bramhankar
8. Dr Gajanan Jadhav
9. Dr. S.K. Sayyad

Q.2 Designation



Q.3 How clear was the lecturer's explanation of the Newton Raphson method?



Q.4 What did you most like about Dr Anwane sir's lecture style?

Response:

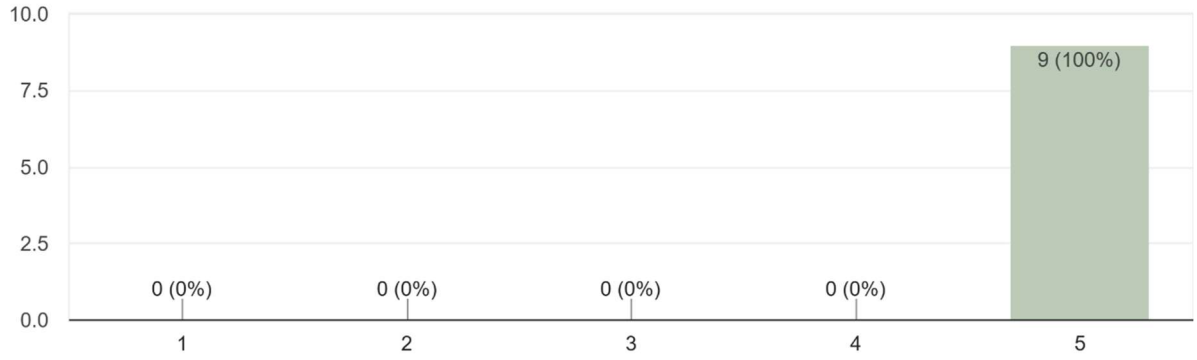
- I appreciated your lecture, especially the way you started with the historical background and basic concepts.
- Both theoretical as well as maple explanation. Your use of visual aids enhances everyone's understanding and engagement throughout the lecture.
- His skill of diving deep into concepts makes him special.
- Good communication

- Three means used for explanations 1. chalk and board 2. Excel 3. Maple. Most liked maple which visualized the roots
- simple explanation using MAPLE
- Two way communication
- The content and the way of elaborating topic

- The way sir started with a historical approach and relating the pblm with real world entangled us with the topic for longer time

Q.5 How engaging and interactive was the lecture?

Response:



Q. 6 What take away or insights did you gain from this lecture?

Response:

- The Newton-Raphson method is a powerful numerical technique for finding roots of equations, often converging faster than other iterative methods like the bisection method.
- I learned how to improve my skills & how to keep up with the lessons.
- It definitely helped me for future calculations where I'll need to deal with roots of complex high index equations.

- Deep knowledge
- Clarity of topic
- If we put some efforts consistently on any hard things that we may feel, we get perfect result at end. I mean to say MAPLE is not too hard if we put consistent efforts.
- I learned how to improve my teaching skills
- Content of the topic
- I gained Deeper understanding of the Newton Raphson method and visualize the actual behavior of the function using maple.

Q.7 How has this lecture influenced your thoughts or perspectives on the topic?

Response:

- It highlights how mathematical equations that are difficult (or impossible) to solve algebraically can be handled efficiently using numerical techniques like Newton-Raphson also this equation is represented graphically with the help of Maple
- We actually get to know that how the method can be continuously applied to generate an iterative scheme with arbitrarily specified order of convergence.
- Moderately, my math's part of physics is as good as it was for Einstein or Oppenheimer.
- Mathematical problem solving
- How to use maple and excel in teaching
- If we put some efforts consistently on any hard things that we may feel, we get perfect result at end. I mean to say MAPLE is not too hard if we put consistent efforts.
- Become very clear and easy to understand Graphically.
- Clear cut understanding

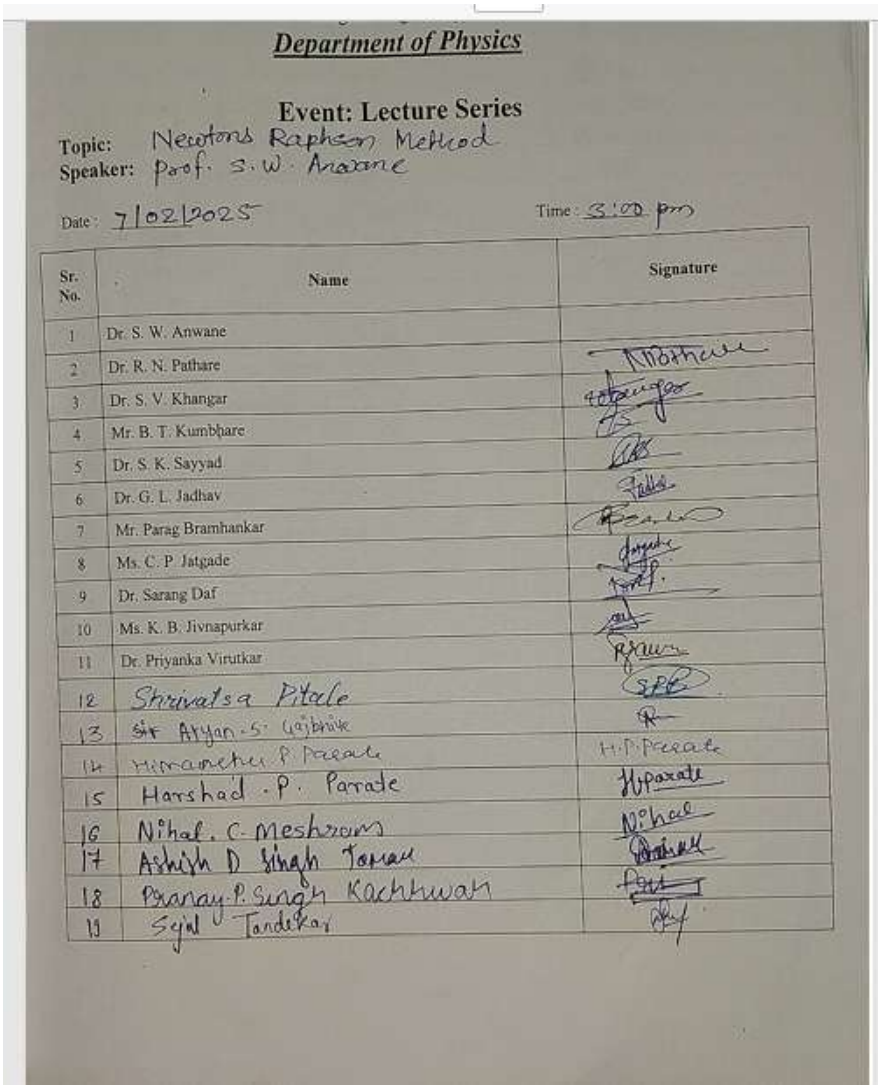
Q. 8 Is there anything you'd like to express to Dr. Anwane Sir in terms of gratitude or appreciation?

Response:

- You've shaped countless minds, including mine.

- He was the sole reason for me to attend the lecture, his teaching methods have always fascinated me. I was least interested about the topic but just attended the lecture cause Anwane was delivering it.
- Wonderful
- Sir, your command on topic and way to express is marvelous
- Thank you, sir, for delivering such insightful lecture
- It was very nice to listen from you, Sir.
- It's truly an amazing lecture and best wishes for more and more topics ahead

Attendance:



Department of Physics

Event: Lecture Series

Topic: Newtons Raphson Method
Speaker: Prof. S.W. Anwane

Date: 7/02/2025 Time: 3:00 pm

Sr. No.	Name	Signature
1	Dr. S. W. Anwane	
2	Dr. R. N. Pathare	
3	Dr. S. V. Khangar	
4	Mr. B. T. Kumbhare	
5	Dr. S. K. Sayyad	
6	Dr. G. L. Jadhav	
7	Mr. Parag Bramhankar	
8	Ms. C. P. Jatgade	
9	Dr. Sarang Daf	
10	Ms. K. B. Jivnapurkar	
11	Dr. Priyanka Virutkar	
12	Shrivatsa Pitale	
13	~~Sir~~ Aryan S. Gajbhiye	
14	Hiranmaichee P. Prasad	H.P. Prasad
15	Harshad P. Parate	H.Parate
16	Nihal C. Meshram	N.Chal
17	Ashish D Singh Tomar	
18	Pranay P. Singh Kachhwah	
19	Sejal Tandekar	

20.	Sanjogi Gajanan Bende	
21.	Nancy Naresh Bawane	
22.	Aarohi. Nitin. Dembhwane	
23.	Dharashree Kishor Lidbe	
24.	Sampada Vijay Zaldeode	
25	Kratika Pravin Khapre	
26	Vanshika Kailash Gajbe	
27	Tushala yuvaraj makode	
28	Shreya Vijay Lokhande	
29	Anam Asif Syed	
30	Hansika Jangade	
31	Sharvari Dhanraj Sakhare	
32	Kalpana Tarachand Harshe	
33	Palak Sunil Dubey	
34	Mayank Prashant Dongre	
35.	Prem kumar kapse	
36.	Paras A. Atram.	
37	Mohit O Dhandale	
38	Aakash. A. Pawar	
39)	Vivek. V. Thakurkar	
40)	Vidya O Manmode	
41)	Shruti G Mehar	
42)	Harshada Badane	
43)	Anjali Nasare	
44)	Rudrayani Hargudde	
45)	Yash S. Hatwar	
46)	Shirish Gawde	
47)	Prachi Nandanwar.	
48)	Yogita Sahare	
49)	Taniya Ukey.	

Report on Lecture Given by Professor Dr. S. W. Anwane on Simple Harmonic Motion

Report on Lecture Given by Professor Dr. S. W. Anwane on Simple Harmonic Motion

Date and Time: 10:00 AM, 10th February 2025
Venue: C-4 Classroom
Topic: Simple Harmonic Motion
Speaker: Professor Dr. S. W. Anwane, Head of the Department

On the 10th of February 2025, a highly engaging and informative lecture on Simple Harmonic Motion (SHM) was delivered by Professor Dr. S. W. Anwane, Head of the Department, at 10:00 AM in the C-4 classroom. The lecture was a combination of theoretical analysis and practical application using Maple software, with active student participation throughout the session.

1. Introduction to Simple Harmonic Motion

Professor Anwane began the lecture by introducing the fundamental concept of Simple Harmonic Motion (SHM). He explained the importance of SHM in the study of oscillations and waves, providing a broad context for its relevance in physics. The professor emphasized that SHM is a form of periodic motion in which an object moves back and forth around a central equilibrium position, with the restoring force proportional to the displacement.

2. Derivation of SHM

The core of the lecture was dedicated to the detailed derivation of SHM. Professor S. W. Anwane derived the equation of motion for an object undergoing SHM, starting with Newton's second law and the restoring force proportional to displacement:

$F=-kxF$

He then moved on to the differential equation governing SHM and solved it, resulting in the general solution for displacement as a function of time.

He also explained the Exponential function, tan function, sine function, cosine function, offering graph for each. This section of the lecture was very interesting for understanding the theoretical basis of SHM and was presented with clarity and precision.

3. Visualization of SHM in Maple Software

After the theoretical explanation, Professor S. W. Anwane demonstrated the practical application of SHM using Maple software. He visualized the oscillatory motion by plotting graphs of SHM, sine function, cosine function, tan function, exponential function as functions of time. These graphs beautifully illustrated the nature of SHM and made the relationship between the variables more tangible for the students.

4. Explaining Key Mathematical Functions Using Maple

Professor S. W. Anwane continued by using Maple to explore various mathematical functions that play a role in understanding SHM:

- **Exponential Function**: He discussed the role of exponential functions in describing damping effects in oscillations, which occur in real-world systems.
- **Tangent Function**: The professor demonstrated how the tangent function is related to phase and angular velocity in oscillatory systems.
- **Sine and Cosine Functions**: The sine and cosine functions were thoroughly explained, highlighting their periodicity and role in representing SHM. Graphs were plotted in Maple to show the oscillatory nature of these functions and their application to SHM.

The visual representation of these functions helped students grasp their importance in the study of oscillations and further clarified the relationship between these functions and SHM.

5. Interactive Session with Students

One of the most remarkable aspects of the lecture was the interactive session that followed. Professor S. W. Anwane encouraged students to ask questions, and many took the opportunity to clarify their doubts. The professor responded to their queries with great patience and insight, breaking down complex concepts and offering additional explanations where needed. This interactive dialogue between the students and professor created a dynamic learning environment, where students were able to directly engage with the material and deepen their understanding.

Students asked questions related to the practical applications of SHM, the role of damping, and the mathematical techniques used to solve SHM problems. Professor S. W. Anwane skillfully addressed each question, offering clear and well-structured answers that resonated with the students. The discussion not only helped to resolve any confusion but also encouraged critical thinking and further exploration of the subject.

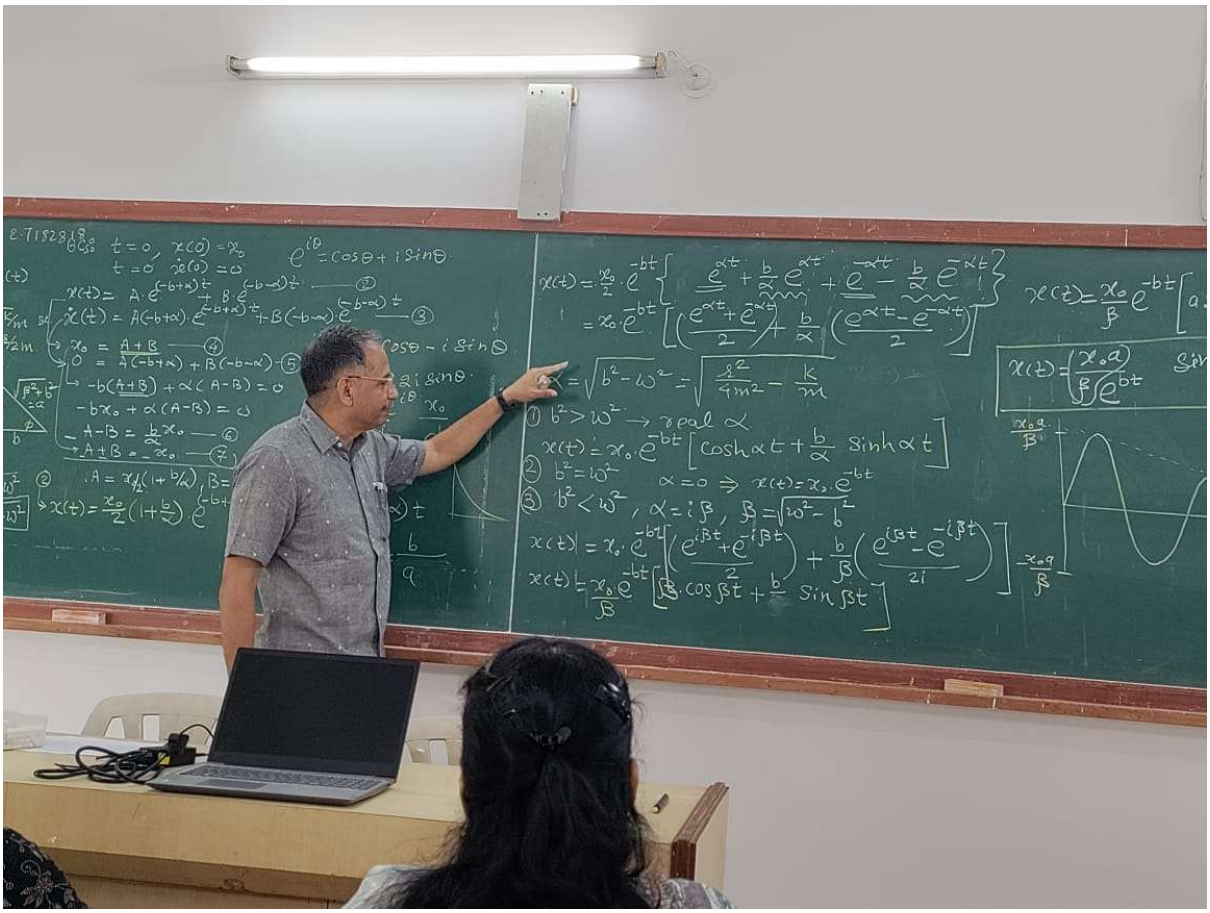
6. Conclusion

The lecture concluded with a summary of the key points covered, including the derivation of SHM, the use of Maple software for visualization, and the exploration of mathematical functions like sine, cosine, and exponential functions. Professor S. W. Anwane emphasized the significance of SHM in various branches of physics and encouraged students to continue experimenting with Maple to explore more advanced concepts.

The session was both informative and engaging, and the students left the lecture with a clearer understanding of Simple Harmonic Motion, its mathematical foundations, and its applications in real-world systems.

7. Acknowledgements

The students expressed their appreciation for the interactive nature of the session and the professor's effective teaching style. The use of Maple software was particularly appreciated for its ability to visually demonstrate complex concepts in an accessible way. Professor S. W. Anwane’s ability to address student queries with clarity and depth made the lecture a highly valuable learning experience for all attendees.

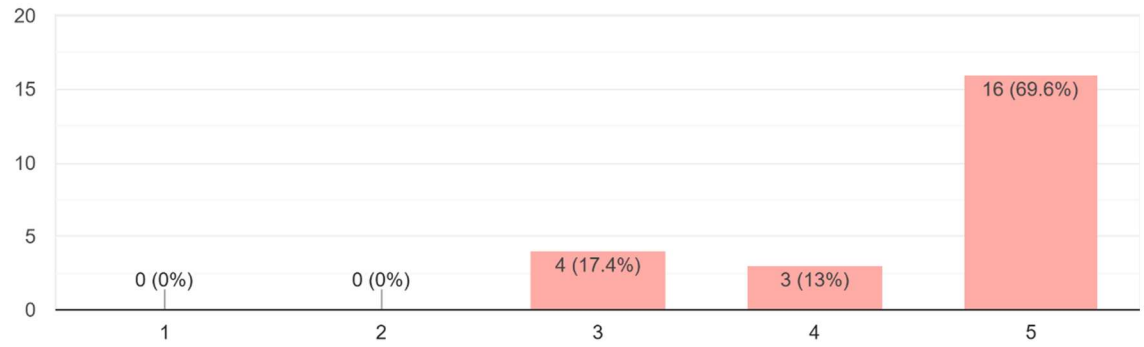


Report Prepared by:
Ms. Kanchan B. Jivnapurkar
Assistant Professor (Ad-hoc)
11th February 2025

Feedback

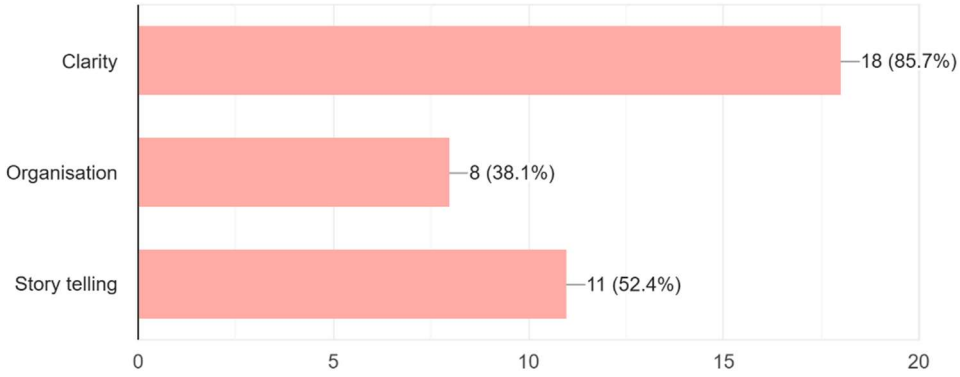
How engaging and interactive was the lecture?

23 responses



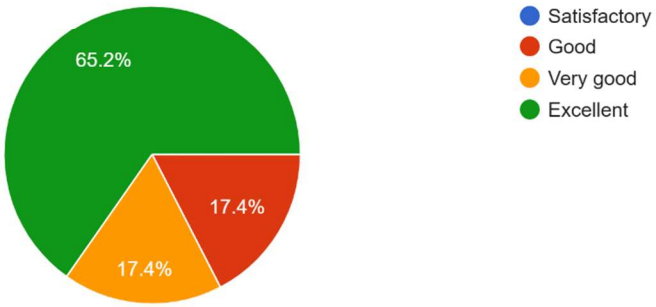
What strength Anwane sir demonstrate during the lecture?

21 responses



How clear was the lecturer's explanation of the damped SHM

23 responses



Q - What did you most like about Dr. Anwane sir's lecture style and Maple software ?

23 responses

- Maple software
- Nice 👍
- Maple software
- Maple Explanation
- Maple Software
- Both
- After a long time I have attended sir's lecture and I can clearly says that day by day I fell in love with sirs teaching style and the way he introduced maple software (a magic tool)and its use for the Physics subject.
- Clarity
- Breaking down complex concepts into understandable segments
- Communication style from teacher to listeners
- Best teaching
- Both are smoother than they appear
- Derivation explanation / graph plotting
- Clarity in explaining complex concepts, engaging delivery that kept students interested, interactive approach, possibly involving questions or discussions, real-world applications to connect theory with practice. As for Maple software, it's excellent for symbolic computation, visualization, and solving complex mathematical problems.
- Clarity
- Clear explanations with engaging visuals and real examples
- It was outstanding lecture and the maple sortware
- Interactive Graph Plotting And Visualization of SHM/Damped SHM
- The way they explained us those equation from very basic helped me clear my concepts . It was first time i learned using maple , i would like to have more sessions on it so i may learn how to use it
- Presentation
- Dr. Anwane Sir’s lecture style is likely engaging, clear, and well-structured, making complex concepts easier to understand.Maple software helps in solving complex mathematical problems, from calculus to differential equations, with ease. The interactive plotting and step-by-step solutions make learning more intuitive.

Q- What take away or insights did you gain from this lecture?

10 responses

- Equation clarity using Maple
- Learned how to use maple Software
- Clear understanding of the topic.
- Easy way of understanding SODE
- The ability to create interactive graphs helped in understanding how velocity, exponential function, tan function, sine function, cosine function vary over time.
- Practical Application of Theory
- The importance of Maple tool

- How Variations of parameters like m,r, fhi influences damped harmonics.
- Using AI / Computer it made us learn those equation graphs on different level It made me think more on this topic and was very interesting
- Maple automates tedious calculations, allowing students and researchers to focus on problem-solving rather than manual computation.

Q- How has this lecture influenced your thoughts or perspectives on the topic?

6 responses

- -
- Lecture has the clean motive which endures all my doubts
- Confidence in Solving Complex Problems
- It has propelled me to lea
- It greatly affected and boosted the visualization about various functions, parameters and Their influence on Harmonic motion
- T lecture was engaging, it inspired me to delve deeper into computational mathematics, simulations, or even in programming.

Is there anything you'd like to express to Dr. Anwane Sir in terms of gratitude or appreciation?

14 responses

- Appreciate
- Thank you sir for delivering such interesting lecture on Damped Harmonic Motion
- Sir is really did a pretty good job Today!
- Thank you so much sir for this amazing lecture.I inspired a lot due to your subject skills and techniques and I will surely follow your foot steps.
- Good explanation
- Sir, you explained the topic in a very nice way today.
- No
- I sincerely appreciate your insightful lecture on Simple Harmonic Motion using Maple software. Your clear explanations, practical demonstrations, and in-depth approach made complex concepts much easier to understand. The way you connected theory with visualization was truly enhanced my learning experience. Thank you for your dedication, patience, and efforts in making the subject engaging and accessible.
- Thank you for inspiring us to explore this topics in easy way.
- Appreciate
- Thanks for making us known to such a wonderful maple tool
- Thank you Sir for mind boosting visualization and mathematical explanation for Harmonic Oscillation. Great initiative of using MapleSoft. For physics understanding
- Sir , your efforts really matter to us, your kind nature while teaching really moved us. Physics is very interesting subject if someone like u teaches us with that aura and energy

- I want to appreciate the way ,sir has connected theory with practical applications, showing us how powerful computational tools can be in solving real-world problems. His lecture has given me a new perspective on computation and mathematical modeling. Looking forward to learning more under his guidance!"

Report of Lecture on EYE PIECE by Chanda Jatgade

Report of Lecture on EYE PIECE by Chanda Jatgade

Speaker: Miss. Chanda Jatgade
Topic: Eyepieces
Venue: C4, Dept. of Physics, Science College, Nagpur.
Date & Time: February 11, 2025 | 3:00 PM

Eyepieces plays vital role for the performance and enjoyment of instruments like telescopes, microscopes, and cameras. By understanding the various designs, focal lengths, and characteristics, users can select the eyepiece that best suits their specific needs, enhancing their experience and the quality of their observations. Whether for professional use in science or astronomy or casual observation, a good eyepiece can significantly impact the clarity, sharpness, and comfort of view. To strengthen out the ideas about eyepiece the Department of Physics taken the initiative to organized Lecture of our one of the faculty member Miss. Chanda Jatgade.

Department of Physics, Shri Shivaji Science College Congress Nagar Nagpur organized a lecture on Eyepies on 11/02/2025 in C4 classroom. Speaker has explained various eyepieces such as Huygens Eyepiece, Ramsden Eyepiece, Kellner Eyepiece, Orthoscopic Eyepiece, Wide-Angle Eyepiece, Zoom Eyepiece, Barlow Lens etc. Speaker has also explained the importance, characteristics, applications and right selection of various eyepieces. Some applications and few ways of right selection mentioned in report:

Astronomy: In astronomy, eyepieces helps to observe celestial bodies like planets, stars, and galaxies. Different eyepieces are selected based on the type of observation (planetary, deep sky, lunar, etc.) and the magnification needed.

Microscopy: In microscopy, eyepieces help to magnify samples, offering clarity for research and educational purposes. Microscopes usually come with fixed eyepieces (10x or 15x magnification) but offer higher magnifications using objective lenses.

Photography

In photography, eyepieces are used in viewfinders to frame the shot or in optical viewfinders of cameras. Some cameras use electronic viewfinders (EVF) that provide an electronic image, while others use optical viewfinders, which rely on an eyepiece.

Speaker has also explain Selection of Right Eyepieces on the basis of Telescope Compatibility, Focal Length Needs, Comfort and Viewing Preferences Budget etc

Action Taken Report:

Department of Physics, Shri Shivaji Science College Congress Nagar Nagpur organized a lecture on Eyepies on 11/02/2025 in C4 classroom at 3:00 pm. One of the faculty member of Department of Physics Miss. Chanda Jatgade delivered this session. Speaker has explained the importance, characteristics, applications and right selection of various eyepieces.

The aim of this session is to strengthen the ideas and used of Eyepiece amongst people. Total 30 students and faculties benefitted by this lecture.

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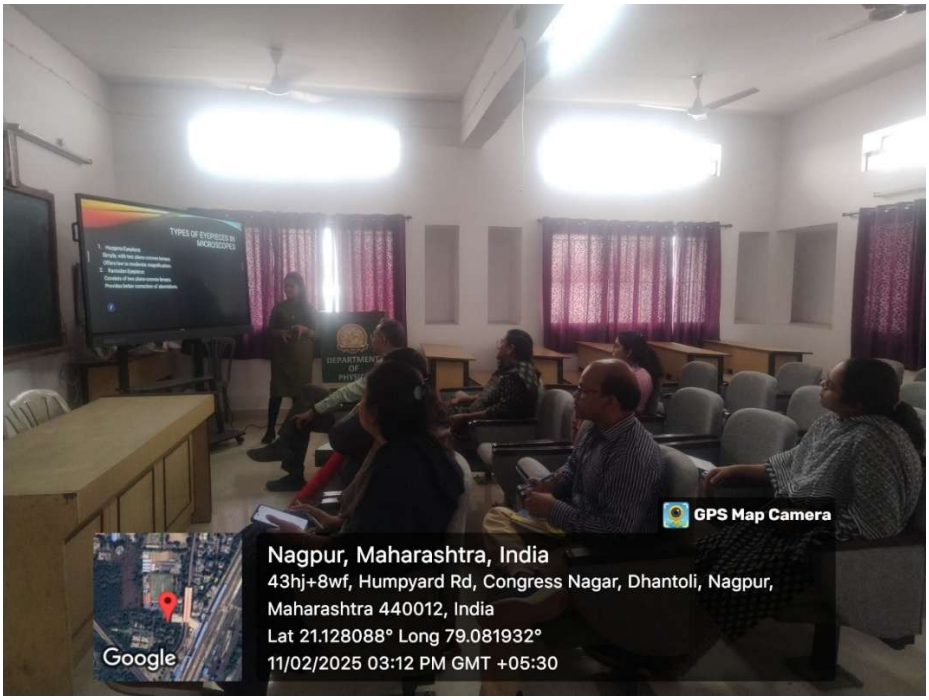
- 

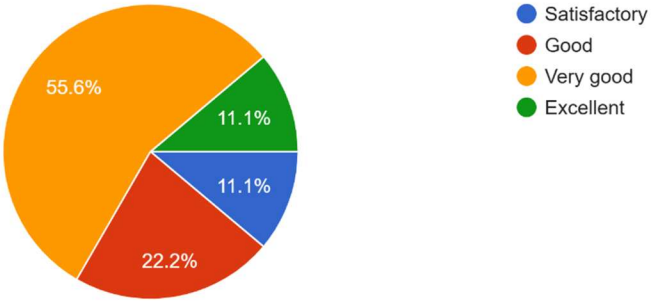
Feedback

Name of Participant
9 Responses
Dr S W Anwane
Dr Ragini Pathare
Dr. S. V. Khangar

Parag Ankush Bramhankar
Dr Gajanan Jadhav
Dr. Sarang Ravindra Daf
Dr. Shahin Sayyad
Ms. Kanchan Bablesh Jivanapurkar
Bhupendra Tikaram Kumbhare

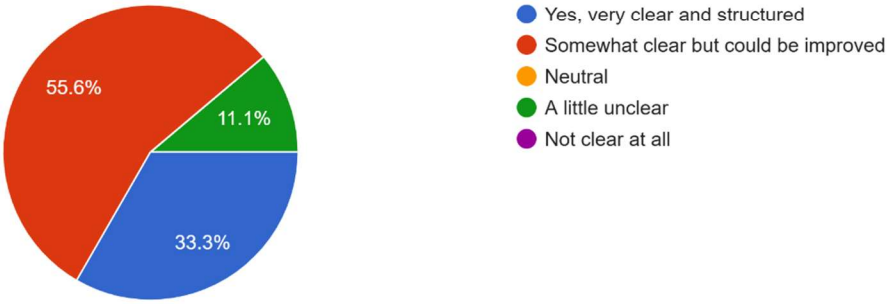
How clear was the lecturer's explanation about topic

9 responses



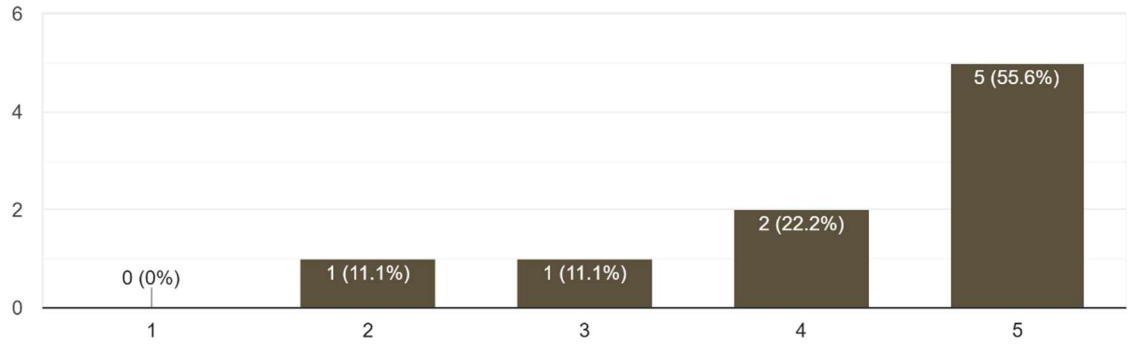
Was the lecture content clear and well-structured?

9 responses



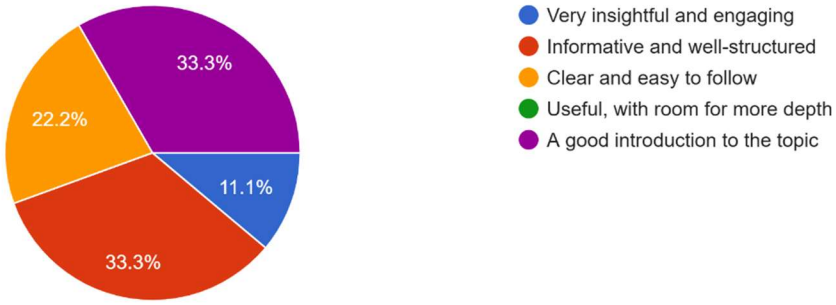
How engaging and interactive was the lecture?

9 responses



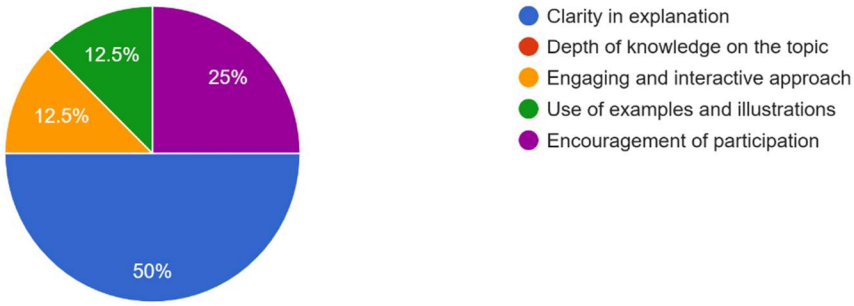
How would you describe the lecture experience?

9 responses



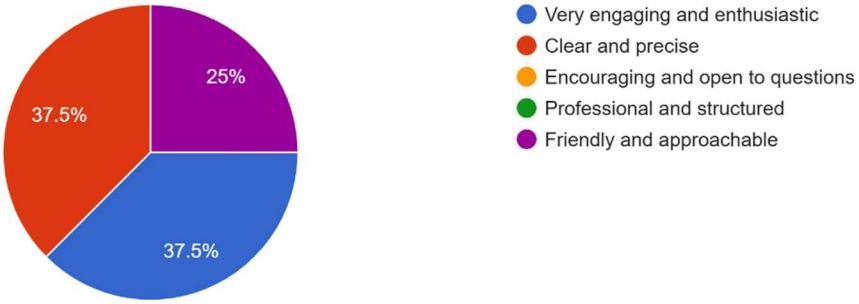
What did you appreciate most about the resource person's delivery?

8 responses



How would you describe the speaker's communication style?

8 responses



Q Any additional thoughts or words of appreciation for the speaker?

3 responses

Journey towards excellence begins! Appreciated raising to deliver the talk.

...

A good interactive Session and interesting topic for initial learners.

Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE

Congress Nagar, Nagpur

Department of Physics

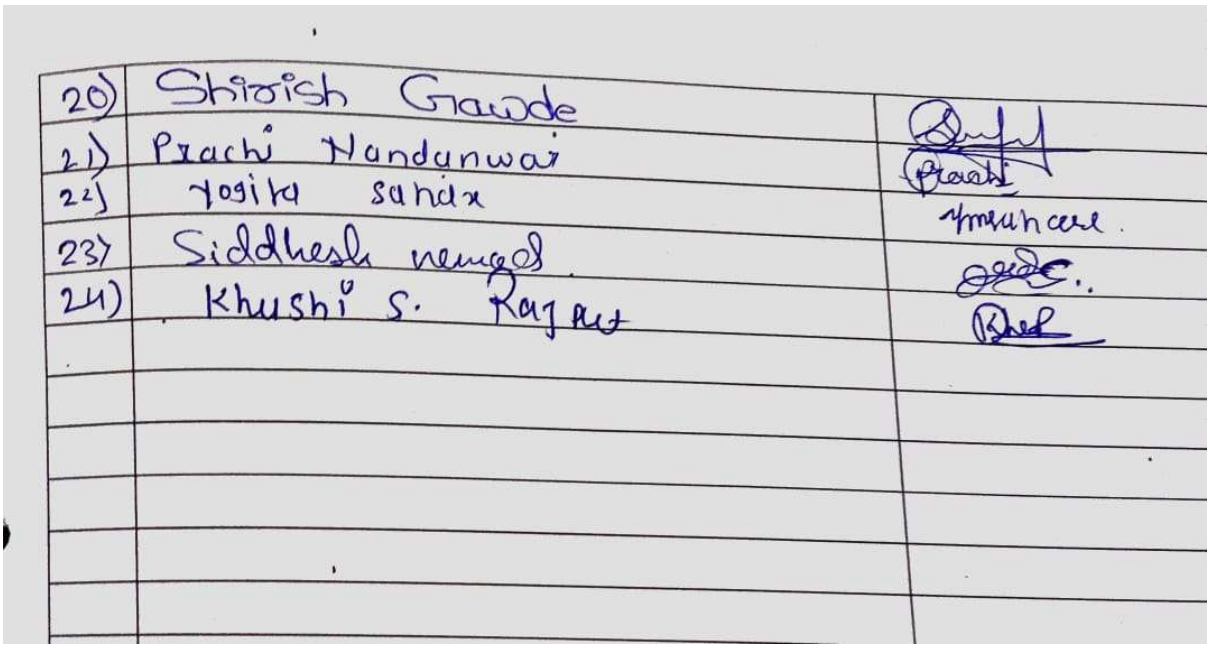
Event: Lecture Series

Topic: Eyepieces

Speaker: Miss. Chanda Jatgade

Date: 11/02/2025 Time: 3:00 pm

Sr. No.	Name	Signature
1	Dr. S. W. Anwane	
2	Dr. R. N. Pathare	
3	Dr. S. V. Khangar	
4	Mr. B. T. Kumbhare	
5	Dr. S. K. Sayyad	
6	Dr. G. L. Jadhav	
7	Mr. Parag Bramhankar	
8	Ms. C. P. Jatgade	
9	Dr. Sarang Daf	
10	Ms. K. B. Jivnapurkar	
11	Dr. Priyanka Virutkar	
12	Jatin P. Kanade	
13.	Aakash . A. Pawar	
14)	Vivek . V. Thelurkar	
15)	Vidya O. Manmode.	
16)	Shruti A. Mehar	
17)	Harshada Badune	
18)	Rudrayani Hangude	
19)	Yash S. Hattewar	


20) Shirish Gawde
21) Prachi Nandanwar
22) Yogita Sahare
23) Siddhesh Nemgel
24) Khushi S. Rajput
Prachi
Yogita Sahare.

Lecture on Construction & Working of Dobsonian Telescope.

Lecture on Construction & Working of Dobsonian Telescope.

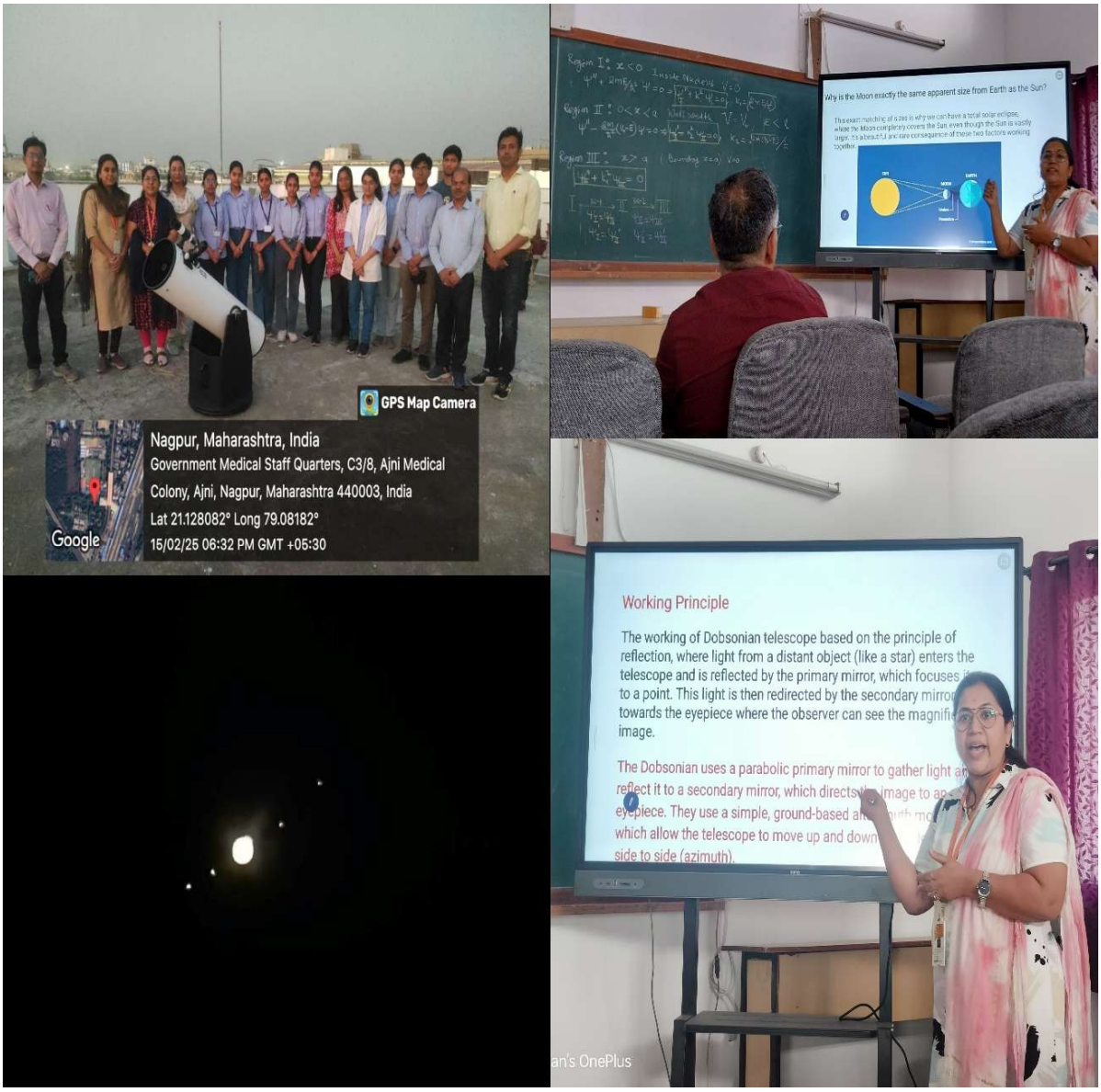
Date of Lecture: 14th February 2025
Lecture Title: Construction & Working of Dobsonian Telescope.
Speaker: Dr. S. V. Khangar, Assistant Professor Department of Physics, SSESA Science College, Congress Nagar Nagpur.
Department of Physics, SSESA Science College, Congress Nagar Nagpur is organizing the fourth lecture of lecture series (Phase-I) on 14th February 2025. The Speaker of lecture series, Dr. S. V. Khangar delivered an insightful lecture on construction & working of Dobsonian Telescope.

Summary of the Lecture:
The Head of the Department Dr. S. W. Anwane presided over the programme. Dr. S. V. Khangar began the lecture with introduction about Dobsonian telescope, its simplicity, cost-effectiveness, and ease of use, which has made it a popular choice among astronomers. The following point is highlighted by Dr. S. V. Khangar in her speaking note.

- **Construction of a Dobsonian Telescope**
    1. Primary Mirror
    2. Secondary Mirror
    3. Optical Tube
    4. Eyepiece
- **Working of a Dobsonian Telescope**
- **Advantages of a Dobsonian Telescope**
- **Portability**

Dr. S. V. Khangar successfully manage a Q&A session. Many students and faculty members attended the fourth lecture of the lecture series.

Photograph :



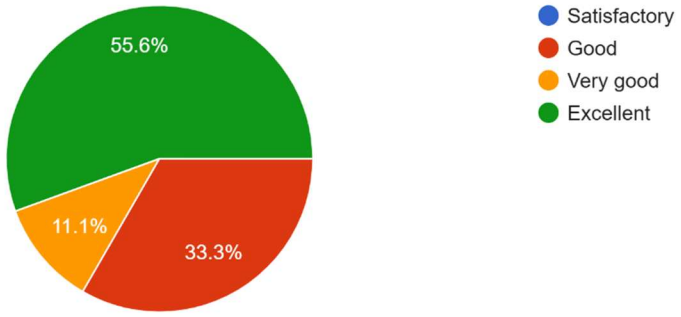
Lecture feedback form Construction and working of Dobsonian telescope
Q.1 Name of Participant.

- Ms. Kanchan B. Jivnapurkar
- DrGajanan Jadhav
- Dr. Sarang Ravindra Daf
- Bhupendra Tikaram Kumbhare
- Dr Shyamkant Anwane

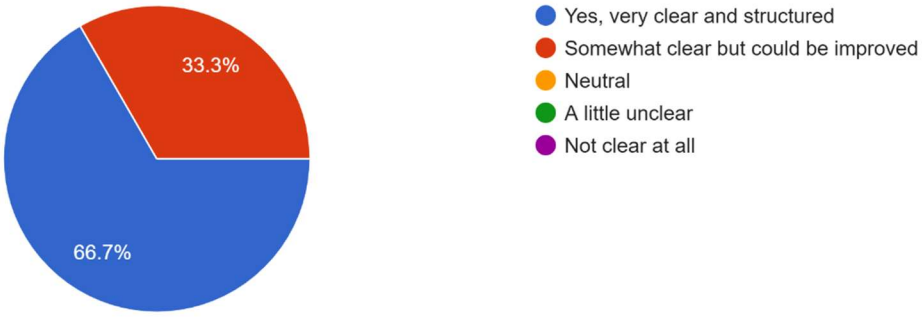
- Parag Ankush Bramhankar
- Dr RN Pathare
- Dr. Shahin Sayyad
- Chanda Prakash Jatgade

Q.2 How clear was the lecturer's explanation about topic?

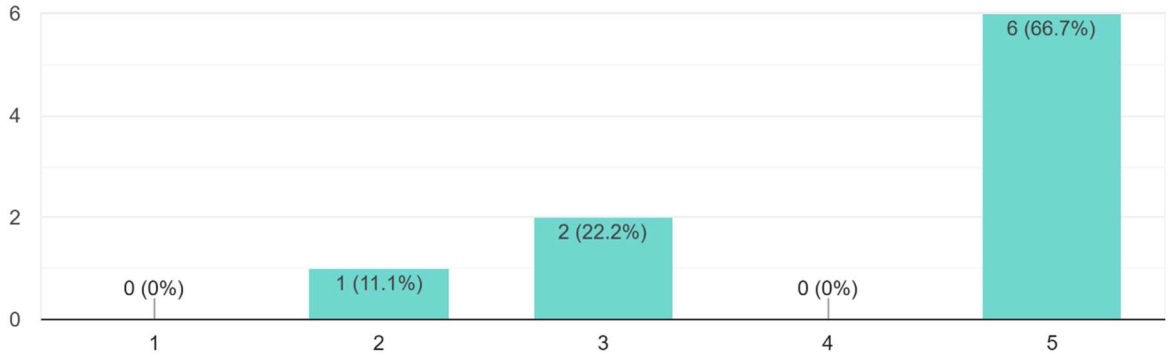
Response:



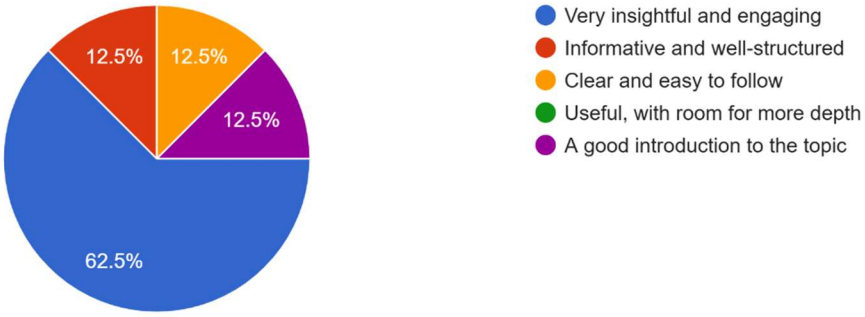
Q.3 Was the lecture content clear and well-structured?
Response:



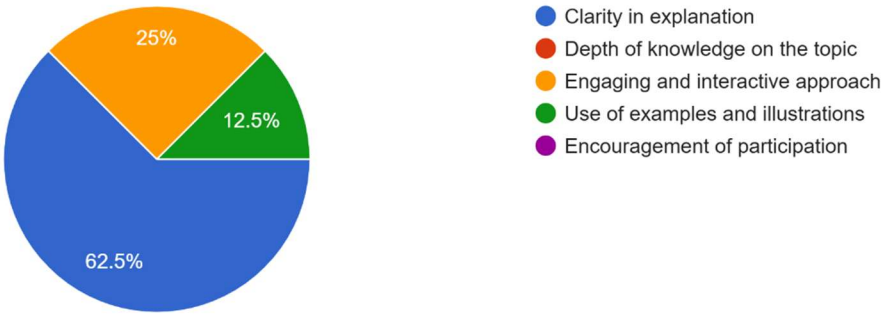
Q.4 How engaging and interactive was the lecture?
Response:



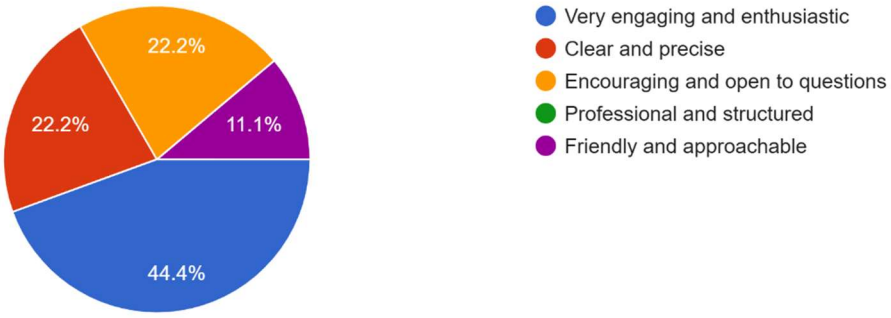
Q.5 How would you describe the lecture experience?
Response:



Q.6 What did you appreciate most about the resource person's delivery?
Response:



Q.7 How would you describe the speaker's communication style?
Response:



Q.8 Any additional thoughts or words of appreciation for the speaker?

Response:

- **No thanks**
- **Your sprit of accepting to prepare lecture readily and living up to it.**

Attendance:

Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE

Congress Nagar, Nagpur

Department of Physics

Event: Lecture Series Phase-I

Topic: Contruction & working of Dobsonian Telescope

Speaker: Dr S V Khangar

Date: 14/02/2025 Time: 3:00 pm

Sr. No.	Name	Signature
1	Dr. S. W. Anwane	
2	Dr. R. N. Pathare	
3	Dr. S. V. Khangar	
4	Mr. B. T. Kumbhare	
5	Dr. S. K. Sayyad	
6	Dr. G. L. Jadhav	
7	Mr. Parag Bramhankar	
8	Ms. C. P. Jatgade	
9	Dr. Sarang Daf	
10	Ms. K. B. Jivnapurkar	
11	Dr. Priyanka Virutkar	
12	Sayali Mankar (PCsM) BSC-III	
13	Sanita Gaidhane (PCsm) BSc-III	
14.	Priya R Tiwari (PCsM) BSc-III	
15	Rajvi P. Mamulkar (PCsM) BSc-III	
16	Mugdha R Darhole PCsM B.Sc III	
17.	Vaiddehi Niranjane (PCsM) BSc III	
18.	Harshit Nourge PCM BSc III	
19	Divya D Jamole PCsM BSc III	
20	Sonu S Chanode PCM BSc III	
21	Bhakti A. Thakre	
22)	Siddhesh R. Nimaje	
23)	Ritik R. Raut	
24)	Deepa R. Gangbois	

Lecture on Dobsonian Telescope by Dr G L Jadhav

Lecture on Dobsonian Telescope by Dr G L Jadhav

Date of Lecture: 12th February 2025
Lecture Title: "Debsonian Telescope"
Speaker: Dr. G. L. Jadhav, Asst. Professor, Shivaji Science College, Nagpur

The Department of Physics, Shivaji Science College, Nagpur, successfully organized the Lecture Series (Phase-I) on 12th February 2025. The lecture was delivered by Dr. G. L. Jadhav, Asst. Professor, Shivaji Science College, Nagpur, on the topic "Debsonian Telescope".

Summary of the Lecture:

Dr. Jadhav began the lecture by introducing the concept of telescopes and their importance in astronomy. He then delved into the specifics of the Debsonian Telescope, explaining its design, working principle, and advantages. The lecturer used diagrams, illustrations, and examples to make the complex concepts more accessible to the audience.

Key Points Discussed:

1. History and development of telescopes
2. Principles of optics and image formation
3. Design and working of Debsonian Telescope
4. Advantages and limitations of Debsonian Telescope
5. Applications of Debsonian Telescope in astronomy and research

The lecture was well-received by the audience, comprising students, faculty members, and research scholars. The Q&A session that followed was interactive and engaging, with the lecturer addressing queries and clarifying doubts.

Acknowledgments:

We express our gratitude to Dr. G. L. Jadhav for delivering the lecture and sharing his expertise with us. We also thank the audience for their active participation and feedback.


Refractor Telescope (Dioptrics)
Reflector Telescope (Catoptrics)

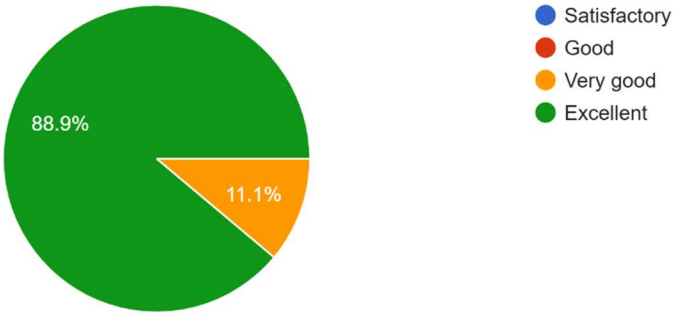

Types of Telescope
GPS Map Camera
Nagpur, Maharashtra, India
43hj+8wf, Humpyard Rd, Congress Nagar, Dhantoli, Nagpur, Maharashtra 440012, India
Lat 21.128103° Long 79.081898°
12/02/2025 03:14 PM GMT +05:30
Google

Feedback:

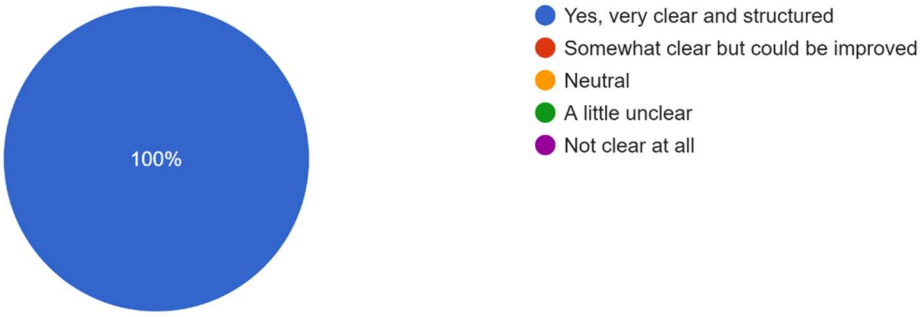
Lecture feedback form Dobsonian telescope

Q.1 Name of Participant:
Response: Parag Ankush Bramhankar
Dr. S. V. Khangar
Chanda Prakash Jatgade
Bhupendra Tikaram Kumbhare
Ms. Kanchan Bablesh Jivanapurkar
Dr. Shahin Sayyad
Dr Ragini N Pathare
Dr S W Anwane
Dr. Sarang Ravindra Daf

Q.2 How clear was the lecturer's explanation about topic?
Response:

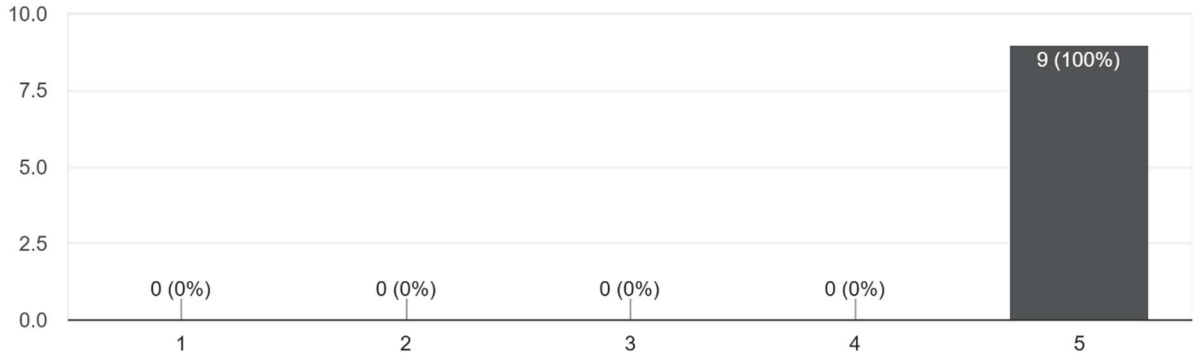


Q.3 Was the lecture well-content clear and structured?
Response:

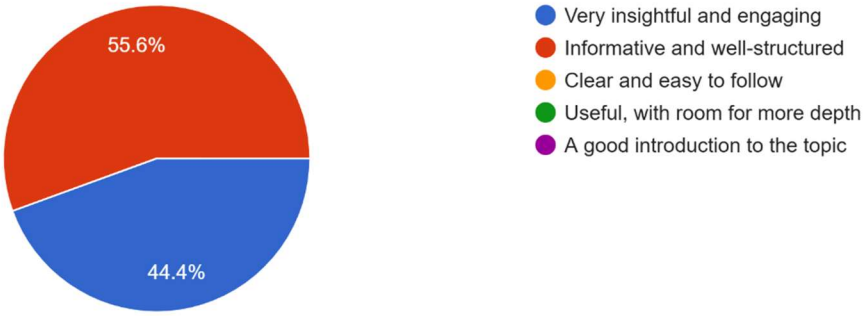


Q.4 How engaging and interactive was the lecture?

Response:

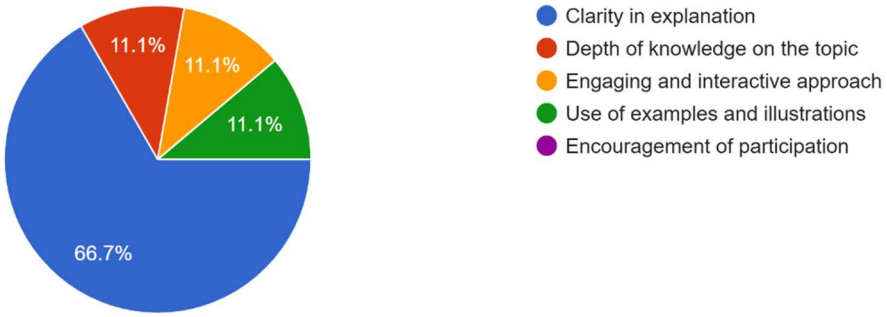


Q.5 How would you describe the lecture experience?
Response:

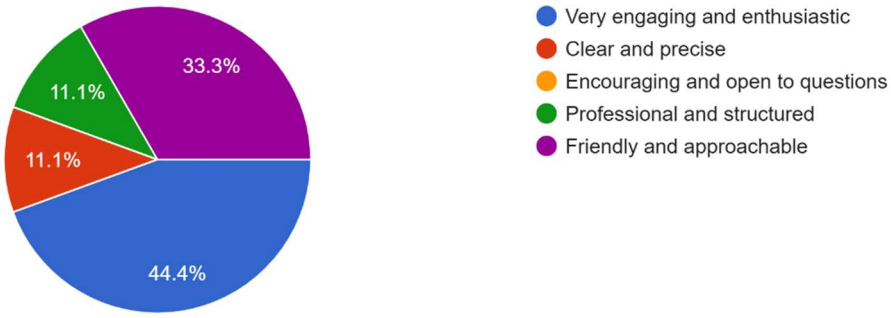


Q.6 What did you appreciate most about the resource person's delivery?
Response:

Q.7 How would you describe the speaker's communication style?



Response:

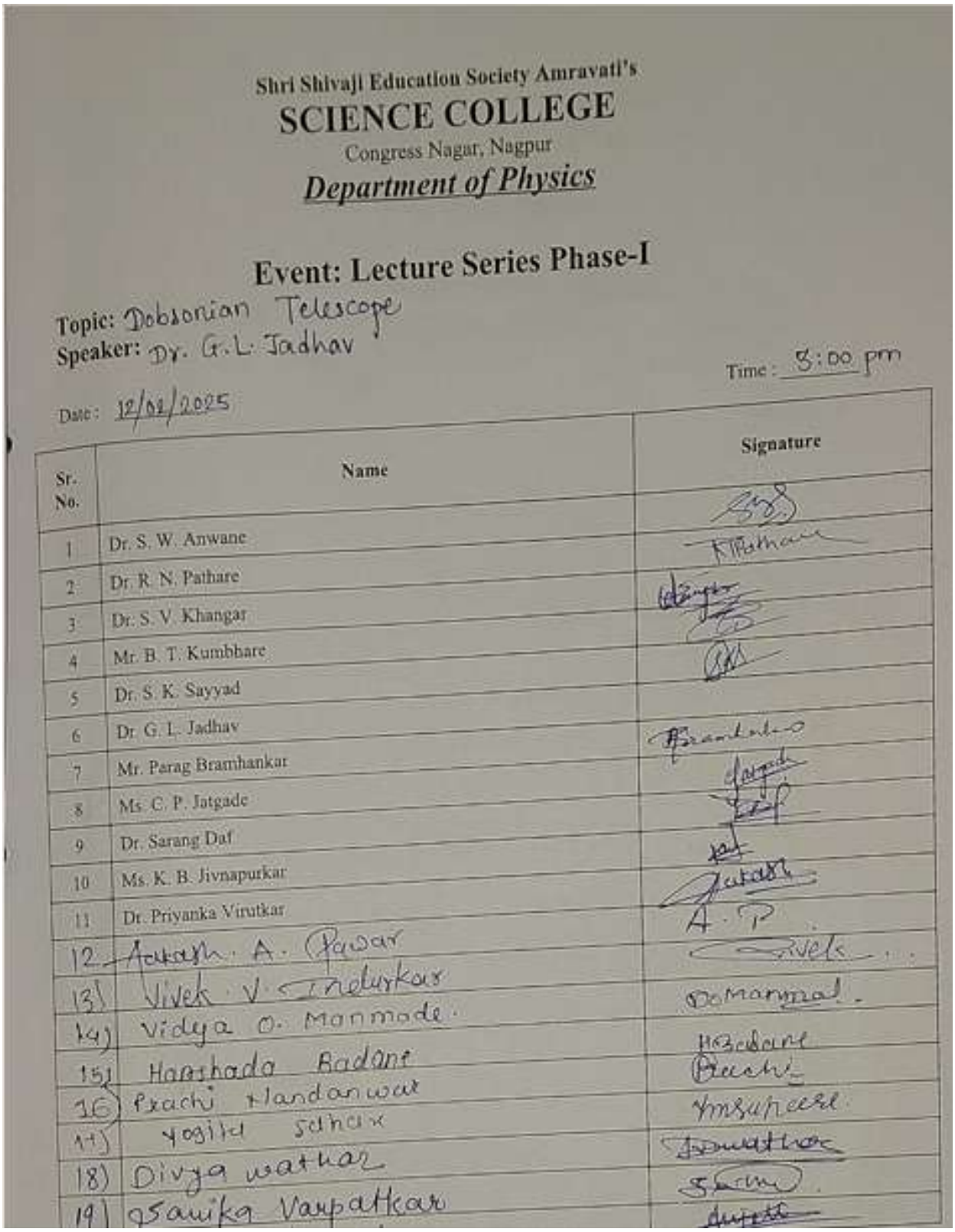
Q.8 

Any additional thoughts or words of appreciation for the speaker?

Response:

- **Good beginning! Appreciated proactive raising for delivery.**
- **The presentation PPT were very informative and Nice presented. Use of different images photos makes presentation more interesting.**

Attendance:



Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE

Congress Nagar, Nagpur

Department of Physics

Event: Lecture Series Phase-I

Topic: Dobsonian Telescope

Speaker: Dr. G.L. Jadhav

Date: 12/02/2025 Time: 3:00 pm

Sr. No.	Name	Signature
1	Dr. S. W. Anwane	
2	Dr. R. N. Pathare	
3	Dr. S. V. Khangar	
4	Mr. B. T. Kumbhare	
5	Dr. S. K. Sayyad	
6	Dr. G. L. Jadhav	
7	Mr. Parag Bramhankar	
8	Ms. C. P. Jatgade	
9	Dr. Sarang Daf	
10	Ms. K. B. Jivnapurkar	
11	Dr. Priyanka Virutkar	
12	Akash. A. Pawar	
13	Vivek V. Ingelurkar	
14	Vidya O. Manmode.	
15	Harshada Badane	
16	Prachi Nandanwar	
17	Yogita Sahare	
18	Divya Wathar	
19	Sanika Vaipatkar	

Report on Lecture by Dr. S. W. Anwane on Least Square Fit Method (Linear & Non-linear)

Report on Lecture by Dr. S. W. Anwane on Least Square Fit Method (Linear & Non-linear)

Date of Lecture: 3rd March 2025

Lecture Title: " Least Square Fitting"

Speaker: Dr. S. W. Anwane, Head of Department of Physics, Shivaji Science College, Nagpur

The Department of Physics, Shivaji Science College, Nagpur, successfully organized the Lecture Series (Phase-I) on 12th February 2025. The lecture was delivered by Dr. S. W. Anwane, Head of Department of Physics, Shivaji Science College, Nagpur, on the topic "Least Square Fitting".

Summary of the Lecture:

Report on the Session: Least Square Fitting & Non-Linear Fitting

A highly informative session on **Least Square Fitting** was conducted by **Dr. S. W. Anwane**, where he provided a detailed understanding of the topic, its mathematical foundation, and its real-world applications. The session was further enriched by **Dr. S. W. Khasare**, who expanded the discussion into **Non-Linear Fitting** during the Q&A segment, adding deeper insights into advanced fitting techniques.

2. Key Highlights of the Session

A. Dr. S. W. Anwane's Lecture on Least Square Fitting

- Provided a **clear and structured explanation** of Least Square Fitting.
- Explained the **mathematical derivation and step-by-step problem-solving approach**.
- Demonstrated the **importance of Least Square Fitting** in data analysis and regression models.
- Presented **real-world applications**, making the theoretical concepts more relatable.
- Engaged participants in discussions, encouraging a deeper understanding of the topic.

B. Dr. S. W. Khasare's Discussion on Non-Linear Fitting

- Shifted the discussion towards **Non-Linear Fitting**, providing a broader perspective.
- Compared **Least Square Fitting vs. Non-Linear Fitting**, highlighting their key differences.

Acknowledgement:

The session was highly **engaging and intellectually stimulating**. **Dr. Anwane Sir's structured approach and clarity** made complex mathematical concepts easy to understand.**Dr. Khasare Sir's insights and interactive discussion** added valuable depth to the session.Both speakers encouraged **critical thinking and real-world application**, making the learning experience enriching.

5. Feedback and Suggestions

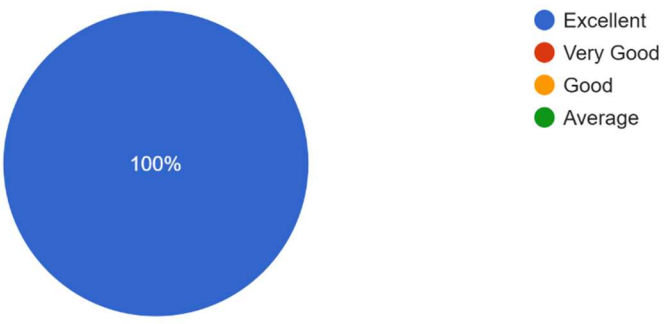
Q.1 Name of Participant

Ans:

1. Parag Ankush Bramhankar
2. Dr.Suresh Darokar
3. Bhupendra Tikaram Kumbhare
4. Chanda Prakash Jatgade
5. Ms. Kanchan B. Jivnapurkar
6. Dr Gajanan Jadhav
7. Dr. Sarang Ravindra Daf
8. Dr R N Pathare
9. Dr. Sugandha V. Khangar
10. Priyanka Devidas Virutkar
11. Dr. Shahin Sayyad

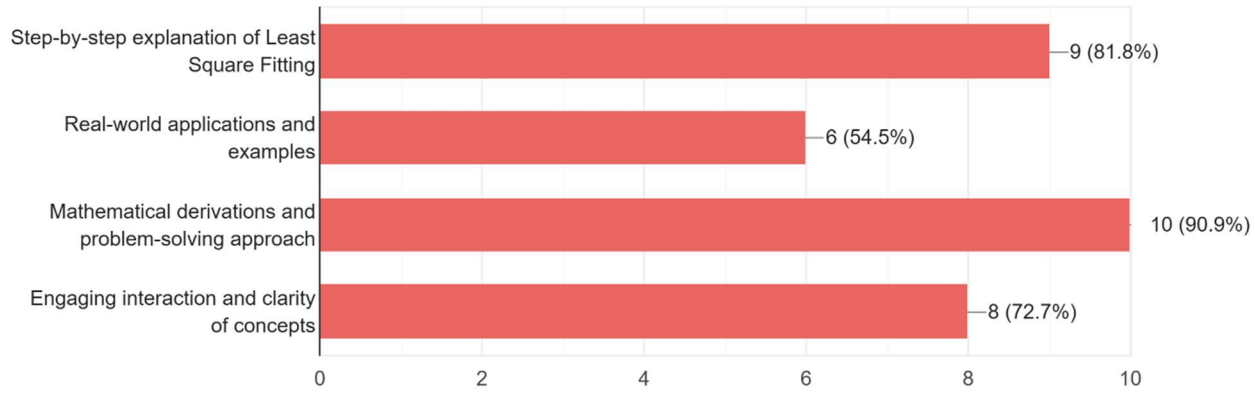
Q.2 How would you rate the clarity and effectiveness of Dr. Anwane Sir's explanation of Least Square Fitting?

Ans:



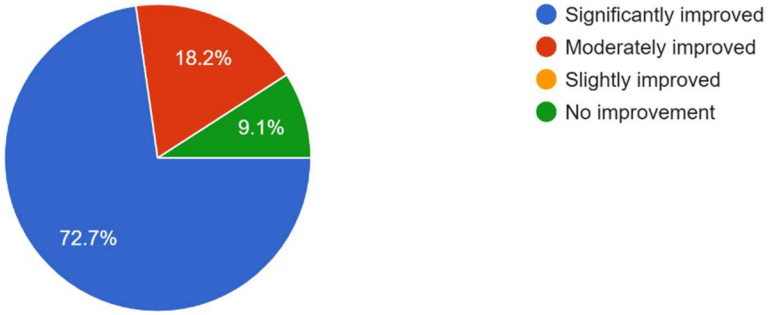
Q.3 Which aspects of Dr. Anwane Sir's lecture were most valuable?

Ans:



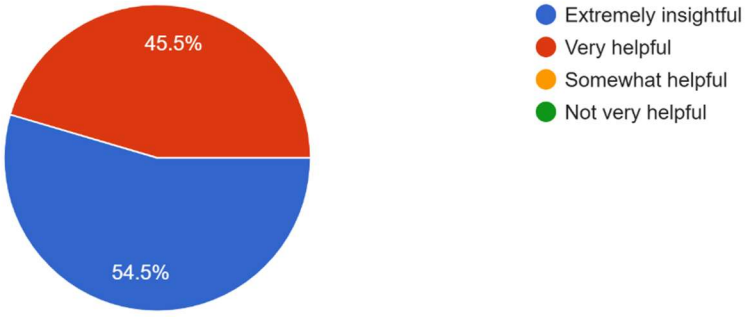
Q.4 How well did the session enhance your understanding of Least Square Fitting?

Ans:



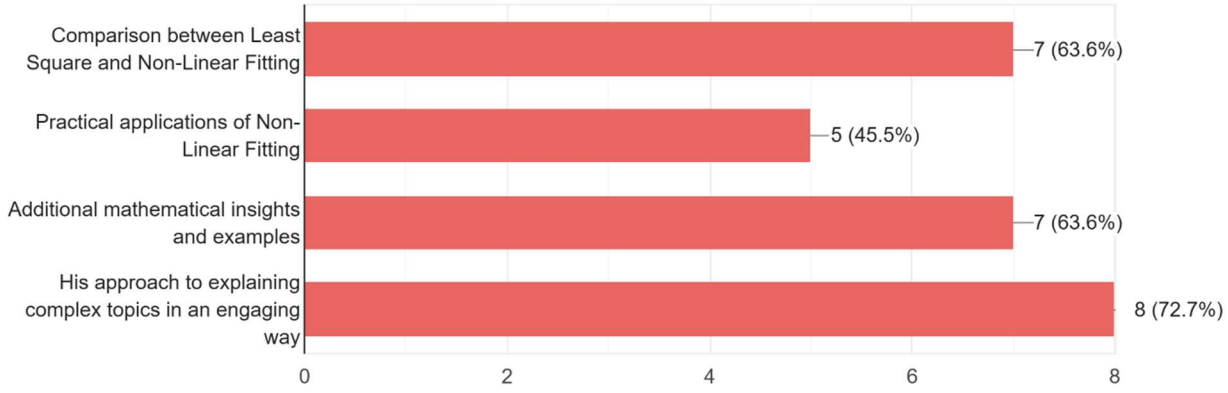
Q.5 How impactful was Dr. Khasare Sir's discussion in broadening your understanding of Non-Linear Fitting?

Ans:



Q.6 What did you find most valuable about Dr. Khasare Sir's discussion?

Ans:



Q.7 If you had to describe today's session in one word, what would it be?

Ans: Very helpful discussion on LSF & NON-LSF

- It was a wonderful lecture and first time listening to Dr. Khasare Sir.
- Very Interactive
- Excellent
- Excellent
- Wonderful
- Wonderful
- Least Squares is a powerful method for linear regression, minimizing errors and optimizing fit, while Non-Linear Fitting captures intricate relationships, requiring careful parameter selection
- insightful
- Great lecture
- Amazing

Q.8 Is there anything you'd like to express to Dr. Anwane Sir and Dr. Khasare Sir in terms of gratitude or appreciation?

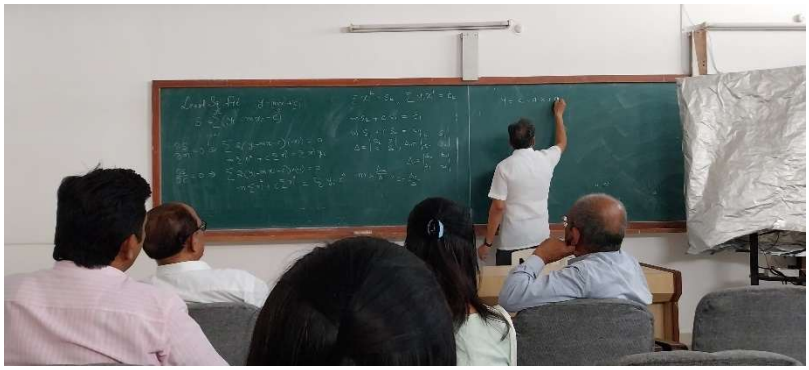
Ans:

- Congratulation to Both Dr. Anwane Sir and Dr khasare Sir has taken a keen intrest and for the discussion and interaction on least square fitting for linear and non linear region, I appreciated to both of you to continue such type of academic session
- Always interesting to listen and learn from you Sir

- High level discussion in simple way
- Thank you for giving us knowledge about Least Square and Non-Linear Fitting
- Thank you sir for taking efforts to describe complicated things into easy way
- Thank you for being such a great teacher.
- Thank you, Dr. Anwane Sir and Dr. Khasare Sir, for such an insightful and engaging session. I truly appreciate your dedication to teaching and your willingness to share your expertise with us. Looking forward to more such enlightening sessions!"

6. Conclusion

The session on **Least Square Fitting & Non-Linear Fitting** was a **valuable learning experience**. The expertise of **Dr. Anwane Sir and Dr. Khasare Sir** provided a **comprehensive understanding** of both linear and non-linear fitting techniques. Participants left with **enhanced knowledge and a strong motivation** to further explore these mathematical tools. The session was a great success, and future sessions on related topics would be highly beneficial.



9

Attendance:

Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE

Congress Nagar, Nagpur

Department of Physics

Phase – II

Event: Lecture Series

Topic: Least Squaring Fitting

Speaker: Prof. S. W. Anwane

Date: 3/02/2025 Time: 3:30 pm

Sr. No.	Name	Signature
1	Dr. S. W. Anwane	
2	Dr. R. N. Pathare	RNPathare
3	Dr. S. V. Khangar	
4	Mr. B. T. Kumbhare	
5	Dr. S. K. Sayyad	
6	Dr. G. L. Jadhav	
7	Mr. Parag Bramhankar	
8	Ms. C. P. Jatgade	
9	Dr. Sarang Daf	
10	Ms. K. B. Jivnapurkar	
11	Dr. Priyanka Virutkar	
12	Dr. S. S. Dagdkar	8/2/25

Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE

CONGRESS NAGAR, NAGPUR.

SCIENCE ASSOCIATION
PHYSICS SOCIETY 2024-25

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Principal	**Professor & Head**	**Convener**
	9422122711	9975768840

Co-conveners
Dr. Mrs R N Pathare
Mr. B. T. Kumbhare
Dr. (Ms) Shahin K. Sayyad
Dr. Gajanan L. Jadhav
Dr. Sarang Daf
Ms. Kanchan Jinapurkar
M.s Chanda Jatgade

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Ms. Anushka Palandurkar B Sc III
Secretary –7666571986
Mr. Yugansh Kanoje BSc II
Jt. Secretary -9423854616
Mr. Jatin Karde B Sc II
Treasurer- 7875723214

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9370875343- (B. Sc. 1st year)
Ms Hansika Jamgade B Sc I
743890817
Ms Ekta Khursankar B Sc I
9022293094
Ms Aarohi Tembhurne B Sc I
9561683798

Notice

Date: 6 /02/2025

All the Faculty members, M.Sc. 1st & 2nd year students, office bearers of Physics Society and all the members of Shivaji Space Explorer Club are hereby informed that the Department of Physics, SSESA Science College is organizing Lecture series. The Phase-I dates are as following. All are requested to assemble in C-4 classroom as per the schedule.

Time: 3pm

Venue: C-4 classroom.

Schedule:

SN.	Name of Faculty	Topic	Date
1.	Prof. S. W. Anwane	Newtons Raphson Method	7/02/2025
2.	Miss. Chanda Jatgade	Eye piece	11/02/2025
3.	Dr. G. L. Jadhav	Dobsonian Telescope	12/02/2025
4.	Dr. S. V. Khangar	Construction & Working of Dobsonian Telescope	14/02/2025
5	Dr S W Anwane	SHM-Damped	10/02/2025
6	Dr S W Anwane	Least Square Fitting	03/03/2025

Dr S V KHANGAR
Dr. S. V. Khangar
Assistant Professor
Department of Physics
Shivaji Education Society Amravati's
Science College
Congress Nagar, Nagpur-440012

Dr S W ANWANE
Dr. S. W. Anwane
Professor and Head
Department of Physics
Shri Shivaji Education Society Amravati's
SCIENCE COLLEGE
Congress Nagar, Nagpur.