



DEPARTMENT OF BIOTECHNOLOGY
Ministry of Science & Technology
Government of India



Anekant Education Society's

JAYSINGPUR COLLEGE JAYSINGPUR

Religious Jain Minority | DST-FIST Level-I

Affiliated to Shivaji University, Kolhapur

Reaccredited by NAAC (3rd Cycle) with 'A' Grade (CGPA 3.24)

DBT-STAR COLLEGE SCHEME

ANNUAL PROGRESS REPORT (2025-26)

DEPARTMENT OF PHYSICS

Dr. Prashant P. Chikode
Departmental Coordinator

Dr. Sandip Sabale
Coordinator
DBT-STAR COLLEGE SCHEME

Dr. Surat Manjare
Principal
JAYSINGPUR COLLEGE JAYSINGPUR


INDEX

Sr.No.	Name of activity	Date
1	Popular Guest Lecture on “Indians into Space”	31.07.2025
2	Wallpaper Exhibition	10.10.2025
3	Study tour of B.Sc. Major Physics at Panhala Space Research Centre, Panhala	19.12.2025 to 20.12.2025
4	Winter School in Physics on Optics and Electromagnetism	26.12.2025 to 30.12.2025
5	Webinar on “Metrology: The Science of Precision Measurements and Quality”	09.01.2026
6	One day workshop on “Mathematical methods in Physics”	16.01.2026
7	“Hands-on Training Workshop in Solid-State Lighting: LED Bulb Design and Assembly”	22.01.2026
8	Study tour of UG Physics Students at Balasaheb Thakare Tarangan and Science Centre, Ratnagiri	27.01.2026 To 28.01.2026

REPORT OF Popular Guest Lecture on “Indians into Space”

Anekant Education Society's
Jaysingpur College, Jaysingpur
Department of Physics
organizes
**Popular Guest Lecture on
“INDIANS IN TO SPACE”**
Under
DBT-Star College Scheme
31st July, 2025 @ 11:00 pm Venue: Conference Hall

RESOURCE PERSON



Prof. Rajmal Jain
Research Scientist, Astronomy and Astrophysics, PRL Ahmadabad
Fellow, Royal Society of Astronomy and astrophysics, UK

Organizing Committee

Prof. Dr. R. D. Mane, Head Dept. of Physics	Dr. S. R. Sabale Coordinator DBT Star College	Dr. S. A. Manjare Principal
Prof. Dr. S.S. Mahajan Dept. of Physics	Dr. S. R. Patil Mr. P.R. Patil	Dr. P.P. Chikode Convener Dept. of Physics
Dr. S. D. Umdale	Mr. P.R. Patil	Dr. R. S. Dhabbe
Mr. A.P. Mane	Dr. R.S. Kamat	Mr.N. B. Kothyavale

ORGANIZED BY
DEPARTMENT
OF PHYSICS
THURSDAY: 31.07.2025

JAYSINGPUR
COLLEGE
JAYSINGPUR



Anekant Education Society's

JAYSINGPUR COLLEGE, JAYSINGPUR

Department of Physics

Organizes

POPULAR GUEST LECTURE ON : INDIANS IN TO SPACE

Under

DBT-STAR College Scheme



Prof. Rajmal Jain

Research Scientist, Astronomy and Astrophysics, PRL Ahmadabad

Fellow, Royal Society of Astronomy and Astrophysics, UK

Mr. Padmakar Patil

Treasurer

Local Committee, Jaysingpur

Dr. Mahavir Akkole

Secretary

Local Committee, Jaysingpur

Dr. Subhash Adadande

Chairman

Local Committee, Jaysingpur

All Local Committee members

Organising Committee

Prof. Dr. R. D. Mane

Head

Dept. of Physics

Dr. S. A. Manjare

Principal

Prof. Dr. S. S. Mahajan

Dept. of Physics

Dr. S. R. Sabale

Coordinator
DBT Star College

Dr. P. P. Chikode

Convener
Dept. of Physics

Prof. Dr. B. M. Sargar

Dept. of Chemistry

Prof. Dr. M.V. Kale

Dept. of Botany

Dr. S. D. Umdale Dr. S. R. Patil Dr. S. R. Dhabbe Mr. P. R. Patil

Mr. A. P. Mane Dr. S. R. Kamat Mr. N. B. Kothavle

Mr. K. R. Kumbhar Dr. G. H. Nikam Dr. R. D. Shinde Mrs. V. H. Shinde

31st July, 2025 @ 11.00 am, Venue : Conference Hall, Jaysingpur College, Jaysingpur

Name of Activity: GUEST LECTURE

Year:	2025-26
Name of the Activity:	Popular Guest Lecture
Date:	31.07.2025
Venue:	Jaysingpur College Jaysingpur
Co-ordinator:	Dr. P.P. Chikode
Organized for:	UG Students
No. of Participants students	85
Teachers	12
Nature:	Academic
Chief Guest/s or Resource Person/s	Prof. Dr. Rajmal Jain, Research Scientist, Astronomy and Astrophysics, PRL, Ahmadabad. Fellow, Royal Society of Astronomy and Astrophysics, UK.

The Department of Physics, Jaysingpur College, Jaysingpur, organized a popular guest lecture under the DBT Star College Scheme on **31st July 2025** at **11:00 a.m.** in the college Conference Hall. The distinguished speaker was **Prof. Dr. Rajmal Jain**, Research Scientist in Astronomy and Astrophysics at PRL, Ahmedabad, and Fellow of the Royal Society of Astronomy and Astrophysics, UK.

The programme was presided over by **Dr. Mahaveer Akkole**, Secretary, Local committee , who graced the occasion with his presence. **Dr. P.P. Chikode** introduced the guest lecture and shared insights about its organization under the DBT Star College Scheme. **Prof. R.D. Mane**, Head of the Department of Physics, gave a brief but impactful introduction of the chief

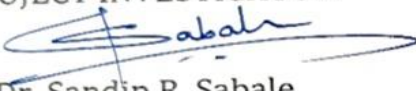
guest.


During the session, Prof. Dr. Rajmal Jain delivered an enlightening lecture on the **journey of the Indian Space Programme**, tracing its evolution from the visionary work of **Dr. Vikram Sarabhai** to the present-day accomplishments by Indian scientists. He discussed various significant space missions such as **Apollo, SLV, and GSLV**, and highlighted India's progress in becoming self-reliant in space science and technology.

He also shared his **personal experiences working with Dr. A.P.J. Abdul Kalam** at PRL, Ahmedabad, and ISRO, offering students rare insights into India's scientific advancements. Prof. Jain's address was both informative and inspirational, as he encouraged students to dedicate themselves to the service of the nation through science and innovation.

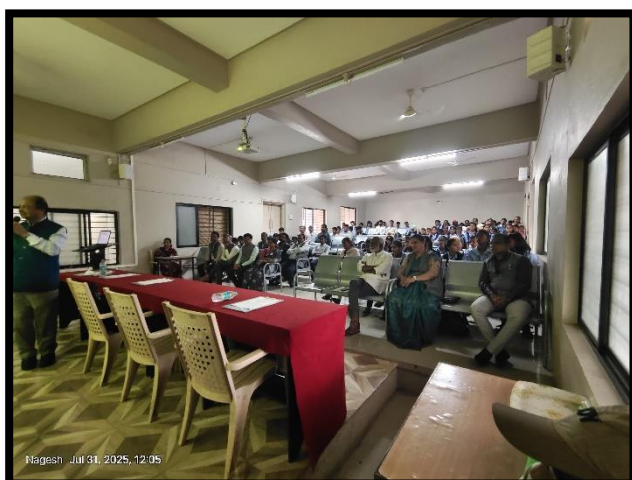
Following the lecture, **Dr. Mahaveer Akkole** congratulated Prof. Jain for his excellent talk and insightful presentation. The event concluded with a formal **vote of thanks by Prof. Dr. S.S. Mahajan**, expressing gratitude to the speaker and all who contributed to the success of the programme.

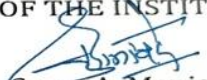

Dr. Prashant P. Chikode
Asst. Professor, Dept. of Physics,
Jaysingpur College, Jaysingpur
Tal. Shirol, Dist. Kolhapur - 416 101
Mob. 9422488462
Email - prashantchikode@gmail.com

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event



HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

**REPORT OF
"Wallpaper Exhibition"**



**JAYSINGPUR
COLLEGE
JAYSINGPUR**

**ORGANIZED BY
DEPARTMENT
OF PHYSICS**

FRIDAY: 10.10.2025

Name of Activity: WALL PAPER

Year:	2025-26
Name of the Activity:	Wallpaper exhibition
Date:	10.10.2025
Venue:	Jaysingpur College Jaysingpur
Co-ordinator:	Dr. P.P. Chikode
Organized for:	UG Students
No. of Participants students	34
Teachers	05
Nature:	Academic
Chief Guest/s or Resource Person/s	Principal Dr. S.A. Manjare Prof. Dr. S.S. Mahajan, Faculty incharge Prof. R.D. Mane, Head, Dept. of Physics

The Department of Physics at Jaysingpur College organized a Wall Paper Exhibition on October 10, 2025, conducted under the prestigious DBT Star College Scheme. The primary objective of this exhibition was to foster scientific temperament among undergraduate students, encourage creative expression of complex physical concepts, and honor the contributions of world-renowned scientists. The event commenced at 11:00 a.m. with the arrival of the Chief Guest, Principal Dr. S. A. Manjare. The exhibition was formally inaugurated by Dr. Manjare with the traditional ribbon-cutting ceremony.

Following the inauguration, Principal Dr. Manjare addressed the gathering. In his speech, he commended the students for their hard work and artistic representation of scientific data and emphasized the importance of such

co-curricular activities in building a holistic academic profile. He also encouraged the students to participate in future research-oriented activities to further the spirit of innovation. The exhibition featured a diverse range of displays, primarily focused on two categories: Nobel Laureates and Their Research: Students prepared detailed biographical and technical posters highlighting the life, struggles, and breakthrough discoveries of Nobel Prize winners in Physics. This section served as an inspiration for aspiring researchers. General Physics Principles: Participants also showcased "General Wallpapers" that simplified fundamental physics laws, governing rules, and various functional applications of the subject in daily life.

The exhibition saw enthusiastic participation from the undergraduate wing of the college. There were Approximately 32 UG students participated. Each student stood by their respective wallpaper, explaining their chosen topic to the faculty and visitors. The students demonstrated remarkable confidence and a deep understanding of their subjects, effectively communicating complex theories through visual aids and verbal explanations.

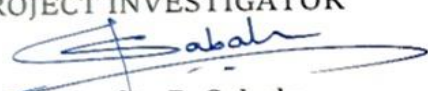
The success of the event was a result of the continuous mentorship provided by the senior faculty members. Prof. Dr. R. D. Mane, Head of the Department of Physics, along with Prof. Dr. S. S. Mahajan, Science Faculty In-charge, provided technical guidance and organizational support to the students, ensuring the content met academic standards while remaining visually engaging.

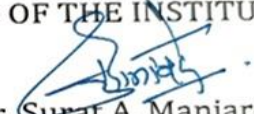
The event concluded with a formal concluding session. Dr. P. P. Chikode proposed the vote of thanks, expressing gratitude to the college administration,

the DBT Star College Scheme for its support, the faculty members for their coordination, and the students for their overwhelming participation.

The exhibition was a resounding success, successfully bridging the gap between textbook physics and creative communication.


Dr. Prashant P. Chikode
Asst. Professor, Dept. of Physics,
Jaysingpur College, Jaysingpur
Tal. Shirol, Dist. Kolhapur - 416 101
Mob. 9422498462
Email - prashantchikode@gmail.com

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

PHOTOGRAPHS OF THE EVENT



PROJECT INVESTIGATOR

Dr. Sandip R. Sabale

Coordinator

DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare

PRINCIPAL

Jaysingpur College, Jaysingpur

REPORT OF
Study tour of B.Sc.II Major Physics Students
2025-26



Panhala Space research Centre, Panhala

ORGANIZED BY
DEPARTMENT
OF PHYSICS,

Duration: 19 Dec. 2025 to
20 Dec. 2025

Name of Activity: Study tour of UG Physics students

Year:	2025-26
Name of the Activity:	Study tour of B.Sc.II major Physics students
Dates:	19.12.2025 to 20.12.2025
Venue:	Panhala Space Research Centre, Panhala
Co-ordinator:	Dr. Chikode P.P.
Organized for:	UG Students
No. of Participants students from Jaysingpur College	12
Teachers	02
Nature:	Academic
Chief Guest/s or ResourcePerson/s	Prof. Dr. R.S. Vhatkar, Director, Panhala Space Research Centre, Panhala

Under the DBT-STAR College Scheme, the Department of Physics, Jaysingpur College, Jaysingpur organized a two-day educational study tour for B.Sc. II Physics Major students at the Panhala Space Research Centre, Panhala **19th to 20th Dec. 2025**. The study tour was planned as an academic enrichment activity to provide experiential learning in the areas of **astronomy, Astrophysics and sky observation**. The program was conducted under the guidance of Prof. Dr. R. S. Vhatkar, Director of the Centre, who served as the resource person for the entire duration of the study tour.

The program commenced with an introductory session by Prof. Dr. R. S. Vhatkar, who provided an overview of the Panhala Space Research Centre, its

objectives, and its contributions to space science education and research. He also briefed the students on the schedule and key learning outcomes of the study tour. One of the most significant highlights of the tour was the overnight sky observation session. Students actively participated in observing the night sky throughout the night under expert guidance. During this session: Students were introduced to various celestial bodies including planets, stars, and constellations. They observed the Milky Way Galaxy, nebulae, and other deep-sky objects. Prof. Vhatkar explained the identification and significance of these celestial objects in detail. Students gained practical knowledge about the positioning and movement of celestial bodies. This hands-on experience greatly enhanced their conceptual understanding of astronomy.

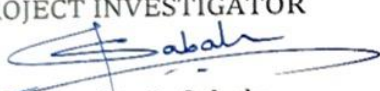
Another important component of the study tour was the introduction to data collection using antennas. During this session: Students learned how signals from space are received through antennas. They were guided on how to record and store observational data. Basic techniques of analyzing the collected data were demonstrated. Students understood how data interpretation is carried out for different scientific purposes. This activity provided valuable insights into real-world research methodologies used in space science.

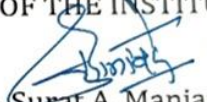
The two-day educational study tour to the Panhala Space Research Centre was a highly enriching and memorable experience for the B.Sc. II Physics Major students. It successfully fulfilled its objective of providing experiential learning beyond the classroom.

The guidance of Prof. Dr. R. S. Vhatkar played a crucial role in making the program informative and engaging. Such initiatives under the DBT-STAR

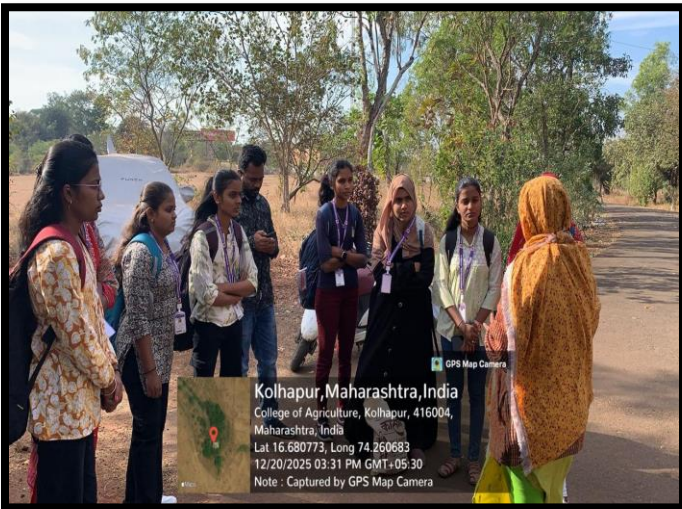
College Scheme significantly contribute to the holistic development of students by combining theoretical knowledge with practical exposure.

The Department of Physics expresses its sincere gratitude to the DBT-STAR College Scheme for financial support and to the Panhala Space Research Centre for their cooperation and hospitality.



PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event



REPORT OF Winter School in Physics on Optics and Electromagnetism



Department of Physics,
Shivaji University, Kolhapur
Rajaram College, Kolhapur

In Association with
The Indian Association of Physics Teachers (IAPT) Sub Regional
Council 08 D
Announces

Winter School in Physics on Optics & Electromagnetism

For undergraduate Students of Physics
December 26-30, 2025

Venue: Department of Physics, Shivaji University, Kolhapur

Patrons

Registration Fees
₹ 500/-

Prof. (Dr.) R. G. Sonkawade,
Head, Department of Physics, Shivaji University, Kolhapur


Dr. M. V. Takale,
President, IAPT SRC 08D

Fees Include:

- Study material, Tea, Breakfast and Lunch;
- Request for accommodation has to be made at the time of registration. Kindly note that participants need to pay for the accommodation separately.

Bank Account Details:
Bank of Maharashtra
Name: Ashwini Bhagwanrao Salunkhe
A/C No. 68017124999
IFSC Code: MAHB0000085

Contact: Dr. A. B. Salunkhe (+91 9765150905)



REGISTER NOW

ORGANIZED BY
**DEPARTMENT
OF PHYSICS,
Shivaji
University,
Kolhapur and
IAPT RC-8D**

**Duration: 26 Dec. 2025 to
30th Dec. 2025**



Department of Physics,
Shivaji University, Kolhapur
Rajaram College, Kolhapur



In Association with

The Indian Association of Physics Teachers (IAPT) Sub Regional
Council 08 D
Announces

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Name: Ashwini Bhagwanrao Salunkhe
A/C No. 68017124999
IFSC Code: MAHB0000085

Contact: Dr. A. B. Salunkhe (+91 9765150905)



**REGISTER
NOW**

Name of Activity: Participation in Winter School by UG Physics students

Year:	2025-26
Name of the Activity:	Participation in Winter School by UG Physics students
Dates:	26.12.2025 to 30.12.2025
Venue:	Dept. of Physics, Shivaji University, kolhapur
Co-ordinator:	Head, Dept. of Physics, Shivaji University, kolhapur
Organized for:	UG Students
No. of Participants students from Jaysingpur College	12
Teachers	00
Nature:	Academic
Chief Guest/s or ResourcePerson/s	Dr. Mahesh Shetti, Prof. A. M. Sheker, Prof. Anil Raghav, Dr. Kiran Kolwankar, Dr. Madhavi Thakurdesai

The Department of Physics, Shivaji University, Kolhapur and Rajaram College, in collaboration with Indian Association of Physics Teachers (IAPT), RC-8D, successfully organized a five-day Winter School in Physics on “Optics and Electromagnetism” from 26th December to 30th December 2025. The primary objective of the winter school was to strengthen conceptual understanding of core physics topics and to provide exposure to experimental techniques and problem-solving approaches for undergraduate students.

A total of 12 students from Jaysingpur College, Jaysingpur participated in the winter school, out of which 8 students were from B.Sc. II (Major Physics) and 3 students were from B.Sc. III Physics. The winter school provided an

excellent academic platform for motivated students to interact with experienced academicians and researchers in the field of optics and electromagnetism.

The inaugural function was held on 26th December 2025 during the morning session. The programme was presided over by Dr. V. N. Shinde, Registrar, Shivaji University, Kolhapur, who graced the occasion as the Chief Guest. In his inaugural address, Dr. Shinde highlighted the importance of conceptual clarity and experimental skills in physics education. The inaugural function was attended by Prof. R. G. Sonakawade, Head, Department of Physics, Dr. Ashwini Salunkhe, Convenor of the Winter School, and life members of IAPT, who extended their best wishes for the successful conduct of the programme. Dr. V. N. Shinde also provided a brief overview of the five-day winter school schedule and emphasized its academic significance.

On the first day (26th December), technical sessions were conducted by Dr. V. N. Shinde, Dr. Mahesh Shetti (Optics), and Prof. A. M. Sheker (Electromagnetism). In the evening, a special session on sky observation was conducted by Dr. Mahesh Shetti, which generated great enthusiasm among the participants and helped them understand basic astronomical observations.

The second day (27th December) featured lectures by Prof. Anil Raghav on Space Weather, providing insights into solar activity and its effects on Earth. Dr. Mahesh Shetti delivered a session on Guiding Rays and Principles of Optics, while Prof. A. M. Sheker discussed Lorentz Force and its Applications, emphasizing real-world relevance.

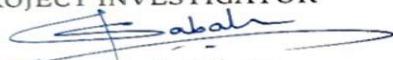
On the third day (28th December), Dr. Mahesh Shetti explained the working of a camera, focusing on optical principles. Prof. A. M. Sheker covered

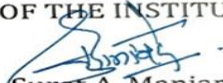
Coulomb's Law and Electrostatics in detail. Mr. Vijay Jadhav conducted sessions on Photometry followed by hands-on demonstrations, which significantly enhanced students' experimental understanding.

The fourth day (29th December) included lectures by Dr. Kiran Kolwankar on Gauss's Law and its Applications and Biot-Savart's Law. Mr. Vijay Jadhav conducted a problem-solving session in optics, which helped students develop analytical skills. Dr. Madhavi Thakurdesai delivered an informative lecture on Magnetic Materials, covering theoretical and practical aspects.

On the final day (30th December), Dr. Kiran Kolwankar discussed the distribution of charges, while Dr. Madhavi Thakurdesai explained concepts of Magnetism and Ampere's Law. The programme concluded with a valedictory function, addressed by Principal Dr. Anita Bodke, who appreciated the efforts of the organizing team and encouraged students to continue their academic pursuit in physics.


Overall, the winter school was highly successful and academically enriching. The Jaysingpur college students benefited immensely from expert lectures, demonstrations, and interactive sessions. In the concluding remarks, the participants expressed their sincere gratitude to the DBT STAR Scheme for availing the registration fees, which made their participation possible and supported advanced learning opportunities in physics.

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event




Dr. Prashant P. Chikode
Asst. Professor, Dept. of Physics,
Jaysingpur College, Jaysingpur
Tal. Shirol, Dist. Kolhapur - 416 101
Mob. 9422498462
Email - prashantchikode@gmail.com

REPORT OF
Webinar on “Metrology: The Science of Precision
Measurements and Quality”

Anekant Education Society's
Jaysingpur College, Jaysingpur
Department of Physics



organizes
Webinar on
“Metrology: The Science of Precision Measurements and
Quality”
Under
DBT-Star College Scheme

9th January, 2026 @ 11:00 am Venue: Department of Physics

RESOURCE PERSON



Dr. Dilip Shivgan
Senior Principal Scientist, CSIR-National Physical
Laboratory(NPL), New Delhi

ORGANIZED BY
DEPARTMENT
OF PHYSICS

FRIDAY: 09.01.2026

JAYSINGPUR
COLLEGE,
JAYSINGPUR

Anekant Education Society's

Jaysingpur College, Jaysingpur

Department of Physics



organizes

Webinar on

"Metrology: The Science of Precision Measurements and Quality"
Under

DBT-Star College Scheme

9th January, 2026 @ 11:00 am Venue: Department of Physics

RESOURCE PERSON



Dr. Dilip Shivgan

**Senior Principal Scientist, CSIR-National Physical
Laboratory(NPL), New Delhi**

Google meet link: <https://meet.google.com/wor-dzwr-tjh>

Organizing Committee

Prof. Dr. S.S. Mahajan
Science In charge

Dr. S. A. Manjare
Principal

Prof. Dr. R. D. Mane,
Head
Dept. of Physics

Dr. S. R. Sabale
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Mr. P.R. Patil

Mr.N. B. Kothavale

Dr. R.S. Kamat

Mrs. P.A. Umaje

Name of Activity: GUEST LECTURE

Year:	2025-26
Name of the Activity:	Webinar
Date:	09.01.2026
Venue:	Jaysingpur College, Jaysingpur
Co-ordinator:	Dr. P.P. Chikode
Organized for:	UG Students
No. of Participants students	38
Teachers	07
Nature:	Academic
Chief Guest/s or Resource Person/s	Dr. Dilip Shivgan, Senior Principal Scientist, CSIR-National Physical Laboratory, NPL, New Delhi.

The Department of Physics, Jaysingpur College, Jaysingpur, organized a webinar on “Metrology: The Science of Precision Measurements and Quality” under the DBT-STAR College Scheme on Friday, 9th January 2026 at 11:00 a.m. The programme was organized for undergraduate (UG) students of Physics with the objective of imparting knowledge about precision measurements, standardization, and quality assurance.

The webinar was delivered by Dr. Dilip D. Shivgan, Senior Principal Scientist, CSIR–National Physical Laboratory (NPL), New Delhi. The lecture was conducted in online mode and was viewed by students on an LED screen in the Department of Physics. A total of 38 undergraduate students attended the lecture out of which 15 are physically in the department, while 07 faculty members joined the programme online .

The programme began with a welcome and introduction by Dr. P. P. Chikode, who highlighted the importance of organizing academic activities under the DBT-STAR College Scheme. This was followed by a brief introduction of the resource person by Dr. R. D. Mane, Head, Department of Physics, who outlined Dr. Shivgan's academic background, research contributions, and his association with CSIR-NPL, New Delhi.


In his lecture, Dr. Dilip Shivgan explained the fundamental concepts of metrology, describing it as the science of measurement that ensures accuracy, reliability, and consistency in scientific experiments and industrial processes.

Dr. Shivgan also highlighted the applications of metrology in various scientific and technological fields, including manufacturing, healthcare, pharmaceuticals, electronics, environmental science, and advanced research laboratories. He explained the role of CSIR-National Physical Laboratory in maintaining national standards of measurement and providing calibration and testing services to industries and research organizations.

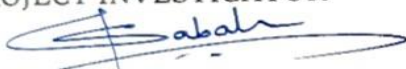
A significant portion of the lecture was devoted to career opportunities in metrology and measurement science. Dr. Shivgan informed students about employment and research prospects at CSIR-NPL, other CSIR laboratories. The lecture was followed by an interactive question-and-answer session.


At the end of the programme, Prof. Dr. S. S. Mahajan delivered the vote of thanks, expressing gratitude to Dr. Dilip Shivgan for his informative lecture and to the DBT-STAR College Scheme for providing financial support to the Department of Physics. He also acknowledged the efforts of faculty members and students for the successful organization of the webinar.

Overall, the webinar was highly informative and educational, enriching the knowledge of undergraduate students and creating awareness about the importance of metrology in science, technology, and industry.

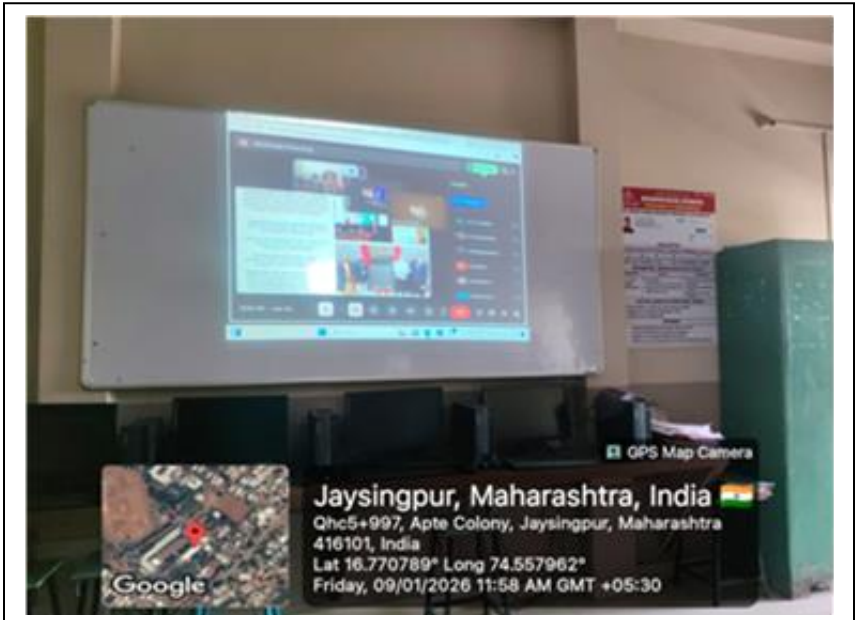
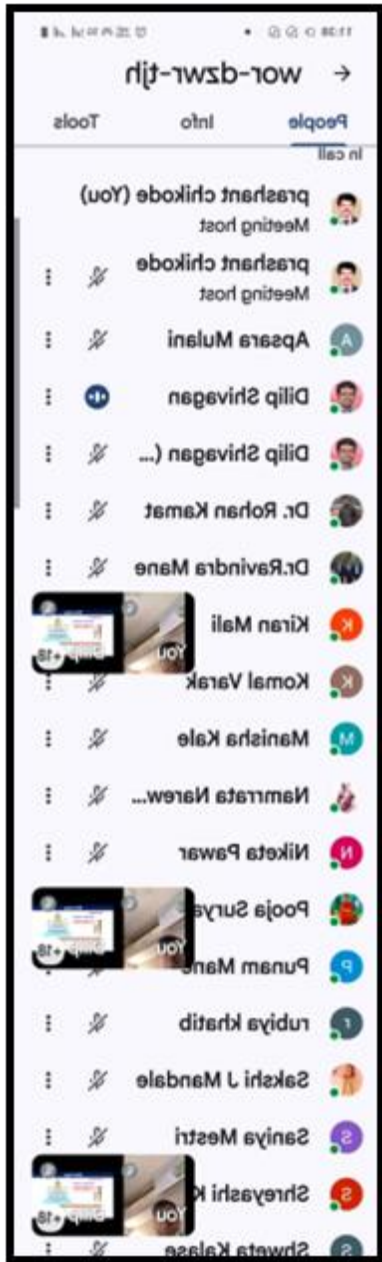


Dr. Prashant P. Chikode
Asst. Professor, Dept. of Physics,
Jaysingpur College, Jaysingpur
Tal. Shirol, Dist. Kolhapur - 416 101
Mob. 9422493462
Email - prashantchikode@gmail.com

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur


HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event



REPORT OF
One day workshop on “Mathematical methods
in Physics”

Anekant Education Society's
Jaysingpur College, Jaysingpur
Department of Physics
organizes
ONE DAY WORKSHOP ON
“MATHEMATICAL METHODS IN PHYSICS”
Under
DBT-Star College Scheme
16th January, 2026 @ 11:00 am Venue: Department of Physics
RESOURCE PERSON



Prof. Dr. M.V. Takale
Research Professor, Dept. of Physics,
Shivaji University, Kolhapur

JAYSINGPUR
COLLEGE,
JAYSINGPUR

ORGANIZED BY
DEPARTMENT
OF PHYSICS

FRIDAY: 16.01.2026

Anekant Education Society's

Jaysingpur College, Jaysingpur

Department of Physics

organizes

ONE DAY WORKSHOP ON

“MATHEMATICAL METHODS IN PHYSICS”

Under

DBT-Star College Scheme

16th January, 2026 @ 11:00 am Venue: Department of Physics

RESOURCE PERSON



Prof. Dr. M.V. Takale

**Research Professor, Dept. of Physics,
Shivaji University, Kolhapur**

Organizing Committee

Prof. Dr. S.S. Mahajan
Science In charge

Dr. S. A. Manjare
Principal

Prof. Dr. R. D. Mane,
Head
Dept. of Physics

Dr. S. R. Sabale
Coordinator
DBT Star College

Dr. P.P. Chikode
Convener
Dept. of Physics

Dr. S. D. Umdale

Dr. S. R. Patil

Dr. R. S. Dhabbe

Mr. A.P. Mane

Mr. P.R. Patil

Mr.N. B. Kothavale

Dr. R.S. Kamat

Mrs. P.A. Umaje

Name of Activity: One Day Workshop

Year:	2025-26
Name of the Activity:	One day workshop on "Mathematical methods in Physics"
Date:	16.01.2026
Venue:	Jaysingpur College, Jaysingpur
Co-ordinator:	Dr. P.P. Chikode
Organized for:	UG Students
No. of Participants students	42
Teachers	07
Nature:	Academic
Chief Guest/s or Resource Person/s	Dr. M.V. Takale, Research Professor, Shivaji University, Kolhapur.

The Department of Physics organized a one-day workshop on "Mathematical Methods in Physics" under the DBT STAR College Scheme on Friday, 16th January 2025, at 11:00 a.m. The workshop was conducted in the Department of Physics with the objective of strengthening the conceptual understanding of undergraduate students by highlighting the close interrelationship between mathematics and physics, which forms the backbone of modern physical sciences.

The workshop was graced by Dr. M. V. Takale, Research Professor, Shivaji University, Kolhapur, who served as the Resource Person for the program. His vast teaching and research experience greatly enriched the academic value of the workshop. A total of 42 undergraduate students from

B.Sc. I, II, and III classes actively participated in the workshop along with 7 faculty members from the department, reflecting enthusiastic involvement from both students and teachers.


The inaugural session began with a brief introduction to the theme of the workshop. Dr. S. A. Manjare, Principal of the college, formally welcomed the resource person and felicitated Dr. M. V. Takale in recognition of his academic contributions. In his address, the Principal emphasized the importance of mathematical tools in understanding physical laws and encouraged students to make the best use of such academic initiatives supported by the DBT STAR College Scheme.

The workshop was conducted in two academic sessions. The first session consisted of an in-depth lecture delivered by Dr. Takale on Mathematical Methods in Physics. During this session, he explained various mathematical concepts and demonstrated how they are applied to solve physical problems. He discussed the role of differential equations, vector calculus, matrices, and complex analysis in different branches of physics. Special emphasis was given to the development of modern physics research through mathematical formulations. Dr. Takale illustrated these ideas with lucid and relevant examples, making complex concepts accessible and engaging for undergraduate students. The session helped students appreciate mathematics not as an isolated subject but as an essential language of physics.

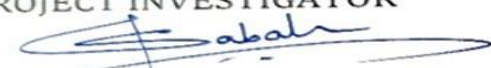
The second session, held after lunch, was devoted to an interactive problem-solving session. In this session, several numerical problems and examples were provided to the students. They were encouraged to solve


problems independently as well as through guided discussion. Dr. Takale actively interacted with the participants, clarified doubts, and explained step-by-step problem-solving techniques. This hands-on approach significantly enhanced students' confidence and problem-solving skills, and the session proved to be highly beneficial and motivating.

The workshop concluded with a vote of thanks proposed by Mr. Akshay Mane, who expressed sincere gratitude to the Department of Biotechnology (DBT) for financial support under the STAR College Scheme, the Principal for constant encouragement, the resource person for sharing his expertise, and all participants for their active involvement.



Dr. Prashant P. Chikode
Asst. Professor, Dept. of Physics,
Jaysingpur College, Jaysingpur
Tal. Shirol, Dist. Kolhapur - 416 101
Mob. 9422408462
Email - prashantchikode@gmail.com

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event



REPORT OF
**“Hands-on Training Workshop in Solid-State
Lighting: LED Bulb Design and Assembly”**

 Anekant Education Society's
Jaysingpur College, Jaysingpur
Department of Physics
organizes
“Hands-on Training Workshop in Solid-State
Lighting: LED Bulb Design and Assembly”
Under
DBT-Star College Scheme
22nd January, 2026 @ 11:00 am Venue: Department of Physics
RESOURCE PERSON

Mr. Anup Joshi,
Director,
FusionLeap Consultancy & Services, Miraj 

ORGANIZED BY
DEPARTMENT
OF PHYSICS

FRIDAY: 22.01.2026

JAYSINGPUR
COLLEGE,
JAYSINGPUR



Anekant Education Society's
Jaysingpur College, Jaysingpur
Department of Physics
organizes

**“Hands-on Training Workshop in Solid-State
Lighting: LED Bulb Design and Assembly”**

**Under
DBT-Star College Scheme**

22nd January, 2026 @ 11:00 am Venue: Department of Physics

RESOURCE PERSON



Mr. Anup Joshi,

**Director,
FusionLeap Consultancy & Services, Miraj**



Organizing Committee

Prof. Dr. S.S. Mahajan
Science In charge

Dr. S. A. Manjare
Principal

Prof. Dr. R. D. Mane,
Head
Dept. of Physics

Dr. S. R. Sabale
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Mr. A.P. Mane

Mr. P.R. Patil

Mr.N. B. Kothavale

Dr. R.S. Kamat

Mrs. P.A. Umaje

Name of Activity: One Day Workshop

Year:	2025-26
Name of the Activity:	“Hands-on Training Workshop in Solid-State Lighting: LED Bulb Design and Assembly”
Date:	22.01.2026
Venue:	Jaysingpur College, Jaysingpur
Co-ordinator:	Dr. P.P. Chikode
Organized for:	UG Students
No. of Participants students	45
Teachers	05
Nature:	Academic
Chief Guest/s or Resource Person/s	Mr. Anup Joshi, Director, FusionLeap Consultancy & Services, Miraj.

A one-day Hands-on Training Workshop in Solid-State Lighting: LED Bulb Design and Assembly was successfully organized under the DBT Star College Scheme on Thursday, 22nd January 2025, by the Department of Physics. The main objective of this workshop was to provide undergraduate students with fundamental knowledge of LED technology along with practical skills related to the design and assembly of LED bulbs. The workshop focused on bridging the gap between theoretical concepts and real-life applications in the field of electronics and solid-state lighting.

The workshop was conducted by Mr. Anup Joshi, Director, FusionLeap Consultancy & Services, Miraj, who served as the Resource Person for the hands-on training sessions. A total of 40 students from B.Sc. I, II, and III classes

participated actively in the workshop. The program was specially designed to motivate students toward skill-based learning and to create awareness about energy-efficient lighting technologies.

The program commenced with a formal inaugural session. The workshop was inaugurated by Principal Dr. S. A. Manjare, in the august presence of Prof. S. S. Mahajan, In-charge, Science Faculty. Dr. R. D. Mane, Head of the Department of Physics, welcomed the dignitaries, faculty members, and students. He introduced the resource person and highlighted the importance of such hands-on training programs for enhancing students' practical understanding and employability skills.

During the inaugural session, Dr. S. R. Sabale, DBT Star Coordinator, explained the objectives, vision, and benefits of the DBT Star College Scheme to the students. As a mark of respect and appreciation, Principal Dr. S. A. Manjare felicitated the resource person Mr. Anup Joshi with a bouquet.

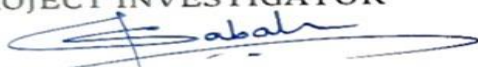
The technical sessions of the workshop were conducted in two major sessions. The first session was a theory-oriented session supported by a PowerPoint presentation delivered by Mr. Anup Joshi. In this session, he explained the basic principles of solid-state lighting, the evolution of LED technology, and the advantages of LEDs over conventional lighting sources. He discussed various electronic components used in LED bulbs such as LEDs, resistors, capacitors, drivers, rectifiers, and printed circuit boards. Fundamental concepts of electronics were explained in a simple and student-friendly manner, which helped participants from all academic levels to understand the topic easily.


The second session was completely dedicated to hands-on training and practical work. Students were divided into small groups, and each group was provided with a complete LED bulb electronic kit. Under the expert guidance of Mr. Anup Joshi, students assembled the LED bulbs step by step. The resource person demonstrated the correct method of connecting electronic components and explained safety precautions to be followed during assembly.

During this practical session, Mr. Joshi personally visited each group, guided the students, corrected their mistakes, and ensured proper assembly of the electronic components. After assembly, the LED bulbs were tested, and students were thrilled to see the successful operation of the bulbs they had constructed themselves. This session greatly enhanced students' confidence and practical skills in electronics.

Students expressed great enthusiasm and satisfaction after completing the hands-on activity. Many students stated that this was their first experience in assembling an electronic device, and it helped them gain a better understanding of the subject.

Overall, the Hands-on Training Workshop in Solid-State Lighting was highly successful and achieved its objectives. The workshop enriched students' knowledge, improved their technical skills, and motivated them toward learning through practical experience.

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event




Dr. Prashant P. Chikode
 Asst. Professor, Dept. of Physics,
 Jaysingpur College, Jaysingpur
 Tal. Shirol, Dist. Kolhapur - 416 101
 Mob. 9422498462
 Email - prashantchikode@gmail.com

REPORT OF
Study tour of UG Physics Students
2025-26



ORGANIZED BY
DEPARTMENT
OF PHYSICS,

Duration: 27 Jan. 2026 to
28 Jan. 2026

Name of Activity: Study tour of UG Physics students

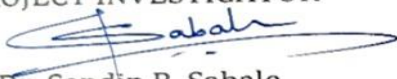
Year:	2025-26
Name of the Activity:	Study tour of UG Physics students
Dates:	27.01.2026 to 28.01.2026
Venue:	Balasaheb Thakare Tarangan and Science Centre, Ratnagiri
Co-ordinator:	Dr. Chikode P.P.
Organized for:	UG Students
No. of Participants students from Jaysingpur College	14
Teachers	02
Nature:	Academic
Chief Guest/s or Resource Person/s	-----

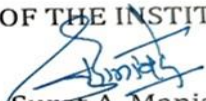
Under the DBT-STAR College Scheme, the Department of Physics, Jaysingpur College, Jaysingpur organized a two-day educational study tour for B.Sc. II Physics Major students at the *Balasaheb Thackeray Tarangan and Science Centre, Ratnagiri* from **27th to 28th January 2026**. The study tour was planned as an academic enrichment activity to provide experiential learning in the areas of **astronomy, astrophysics, cosmology, and fundamental physics**.

At the entry point of the Science Centre, students were introduced to the scientific concept of a **solar clock (sundial)**. They learned the method of **measuring time using the Sun's shadow**, which helped them understand Earth's rotation and the astronomical basis of time measurement. This activity provided practical exposure to classical astronomical techniques.

Dr. Babasaheb Sutar, Technical Expert at the Planetarium, guided the students through the science gallery, which illustrated scientific evolution from the Big Bang theory to the formation of life on Earth. The exhibits demonstrated the integration of physics with cosmology, biology, and Earth sciences. Students attended a one-and-a-half-hour planetarium show covering: Solar eclipses, Structure of the Milky Way galaxy, Celestial objects and cosmic evolution. The immersive visualization significantly enhanced students' conceptual understanding of astronomical phenomena. Two laboratories were devoted to scientific demonstrations and practical learning. The demonstrations included: Mirrors and their types, Conservation of angular momentum, Principle of the shortest path, Concepts of black holes and space-time relationship, Newton's laws of motion, Laws of planetary motion. Each student actively participated in the hands-on activities, enabling better understanding of fundamental physics concepts and development of experimental skills.

Dr. Babasaheb Sutar conducted a technical and career guidance session, where he explained various career pathways in Astronomy and Astrophysics, including research, observatory sciences, space missions, teaching, and higher education opportunities. The two-day educational study tour organized under the DBT-STAR College Scheme proved to be highly successful and academically enriching to students.

PROJECT INVESTIGATOR

Dr. Sandip R. Sabale
Coordinator
DBT-STAR College Scheme
Jaysingpur College, Jaysingpur

HEAD OF THE INSTITUTION

Dr. Surat A. Manjare
PRINCIPAL
Jaysingpur College, Jaysingpur

Photographs of the event

