

## **PHYSICS ASSOCIATION REPORT 2024-25**

The Department of Physics has been in existence ever since the inception of Science batches in the College. The Department offers various major and minor courses for the four year under-graduate programme in Physics and core and complementary courses for the UG and Integrated programmes in Physics. Department aims to up-skill knowledge in all areas of Physics. Besides, the department promotes Vocational Education Training and Energy & Environmental Protection. Programmes Offered are : 5 Year Integrated MSc Physics (BSc+MSc), 3 Year BSc Physics, 4 Year BSc Physics – Honours, 4 Year BSc Physics – Honours with Research.

**Head of the Department:** Dr. Anupama P.

**Lecture in charge of Physics Association:** Dr. Rajani Jacob

Following students were selected as the office bearers.

Association Secretary: Ms. Johanna Susan (II IP Physics) and Aruna Sasi (II B.Sc. Physics)

Committee Members: Ms. Swaliha V N (III B.Sc. Physics)

Ms. Krishnendu K. K. (IV IP Physics)

Ms. Nanda Anish (III IP)

Ms. Aparna Chandan (I IP)

Ms. Vaishnavi (I B.Sc. Physics)

Physics association initiated and supported various social activities, training programmes and coaching for curricular and extracurricular activities.

### **ACTIVITIES**

- ❖ The Department of Physics celebrated **National Space Day 2024** in association with **ISRO to commemorate the success of Chandrayan-3**. The department conducted various activities like quiz and video presentations inside the college and outside in the month of August. Students and faculties of the department visited schools and conducted Space Quiz (preliminary round) at Asram HSS Perumbavoor, GHSS Kallil, GHSS Kongorpilly, St.

Joseph's Convent Senior Secondary School Pulluvazhy, St. Thomas HSS Keezhillam and Mar Kauma HSS Vengoor.



- ❖ The selected students from each school were invited to the college to participate in the final rounds of the **Space Quiz** on 21 October 2024 and 8 teams, 24 students from different schools participated in the final rounds. Students from GHSS Kongorpilly won the first prize. An exhibition was also arranged for the students in the Physics laboratory. on the same day in the afternoon.



- ❖ The department organised an exhibition on ‘Space on Wheels’ in association with Vikram Sarabhai Space Centre, Trivandrum on 21 October 2024. Students from our college and nearby schools visited the same.



- ❖ The Department conducted an **invited lecture** on Introduction to Vibration Physics: Concept And Applications on 9 September 2024. Mr. Ajesh Kumar M, Scientist, Naval Physical & Oceanographic Laboratory (NPOL), DRDO served as the resource person.



- ❖ The Physics Association was inaugurated by **Dr. Prijith S S, Scientist, Space Physics Laboratory, VSSC, ISRO**, Thiruvantahapuram on 10 September 2024. Dr. Prijith S S delivered a talk on **Satellite Remote Sensing: Science and Applications**.







- ❖ A star /decorative items making workshop was held from 11- 20 December 2024. The students under the leadership of faculties of the department made **Neon decorative items and LED stars** for the X'Mas season and sold them during the months December, with the profits going towards a good cause.



❖ The funds from Decorative items were donated to **Santhwanam Special School, Kothamangalam** during a visit on January 24th, 2024. This is an excellent example of



how science and technology can be used for a noble cause. By contributing to this cause, the Department of Physics has shown that they care about the welfare of the special children and are willing to take concrete steps to support them.



- ❖ Department organized a sun spot watching on 31 December 2024 in association with the Breakthrough Science Society Ernakulam chapter. Students from our college and nearby schools visited and watched the sunspots.





- ❖ The Department celebrated National Energy Conservation Day on 16 December 2024. A workshop on energy saving LED bulbs, stars etc was arranged for students of Luke Memorial Public School.



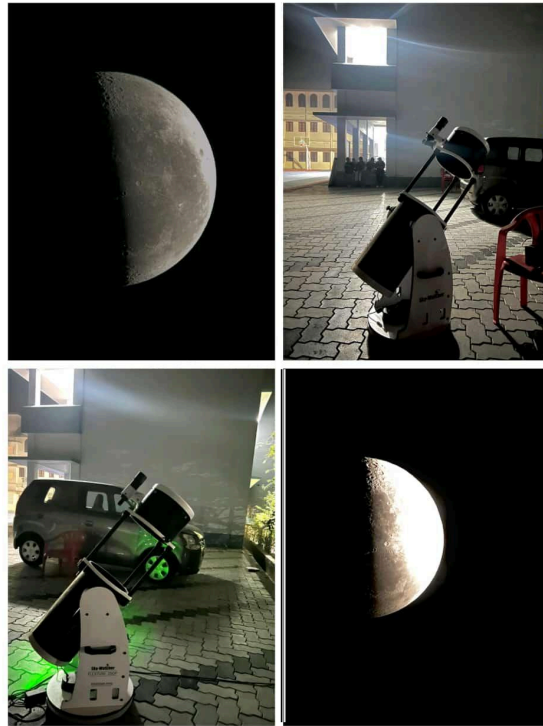
- ❖ The Department of Physics conducted a **Power Quiz** in association with KSEB Officers Association on 26 September 2024. Students from different departments participated in it. Ms. Aruna Sasi (II B.Sc. Physics) and Ms. Anna M. R. (III IP Physics) secured 1<sup>st</sup> and 2<sup>nd</sup> prize in the college level competition and participated in the district level competition held at UC College Aluva, on 6 November 2025.



- ❖ Students of our department attended an Interactive Session with ‘Manjummel Boys’ organised by Perumbavoor municipality in association with municipal library as part of Reading Day Celebration.



- ❖ Department celebrated **National Science Day** by arranging a **Sky Watch programme**. The night sky watch programme was conducted on 20 and 21 February 2025 in our college. Prof. Dr. N. Shaji, Adjunct Faculty, Cochin University of Science and Technology was the resource person.



- ❖ An **Industrial visit** was arranged for the students during 3 October 2024 to the Nuclear Power Plant, Kudankulam, Tamil Nadu. Scientists of KKNPP took a class on nuclear reactions and career opportunities there.





## **STUDENTS ACHIEVEMENTS**

- **Revathy Rajeev secured I rank in MG University B.Sc. Physics Model II (Applied Electronics) examinations during the academic year 2023-2024**



- Krishnendu K.K., Krishna V.S, Laya S. Pillai, Anjima D. of Integrated MSc Physics attended National Conference in Recent trends in science and technology organized by St. Thomas College, Pala and presented papers on “Enhancing Mechanical Properties of Natural Rubber and Synthesis of Nano-scaled MgO”



- Ms. Aruna Sasi (II B.Sc. Physics) and Ms. Anna M. R. (III IP Physics) secured 1<sup>st</sup> and 2<sup>nd</sup> prize in the power quiz conducted by Kerala State Electricity Board (KSEB).
- Third year Integrated M.Sc. Physics, Anna M.R. Jyotsana P, Manjari D Bhattathiri, Nanda Anish served as resource persons in a talk on India's Space Saga organized by Break Through Science Society as part of National Space Day Celebrations.
- Third year Integrated M.Sc.Physics students Anna M. R., Manjari Bhattathiri, Jyothsana, Nanda Anish got prizes in Space Quiz conducted by ISRO as part of National Space Day 2024.
- Ms. Johanna Susan John of (II IP) successfully completed Army Attachment 2025 from 10 January 2025 to 21 January 2025 at Pangode, Trivandrum.



- Krishnendu K.K., Krishna V.S, Laya S. Pillai, Anjima D. and Lucy Sneha George (IV IP Physics) completed a one month internship with the ICT Academy of Kerala on the topic-Machine Learning.
- Ms. Johanna Susan John, Ms. Adithya, Ms. Fathima Naishana and Ms. Anupriya of (II IP Physics) are doing an internship on Social Media with IPSR solutions started on 8 February 2025.
- Krishnendu K.K., Krishna V.S, Laya S. Pillai, Anjima D. and Lucy Sneha George (IV IP Physics) presented a poster in the national seminar- ‘Rubber Insights ‘24’ organized by Rubber Park and RUPMA on 19 October 2024 at Rubber Park, Irapuram.

### **Faculty Achievements:**

#### **Dr. Anupama P-**

- Served as a NAAC Mock team member on **15th January 2025** at Rajagiri Viswajyothi College of Arts and Applied Sciences Vengoor.
- Served as an Evaluator in the District Level Evaluation of Young Innovators Programme on 19 October 2024 organized by Kerala Development and Innovation Strategic Council.
- Served as resource person at Asram Higher Secondary School, Perumbavoor and Govt Higher Secondary School, Valayanchirangara for taking class on Gender equality
- Completed the NEP 2020 Orientation & Sensitization programme under Malaviya Mission Teachers Training Programme (MM-TTP) of UGC organized by MMTTC Kannur University from 19.08.2024 to 29.08.2024.
- Attended national seminar- ‘Rubber Insights ‘24’ organized by Rubber Park and RUPMA on 19 October 2024 at Rubber Park, Irapuram.

#### **Dr. Paulose Thomas -**

- Received Ph. D. Guideship from M.G. University.
- **Book Chapter-** Noble metal based catalysts, Lakshmi Krishna, Paulose Thomas, Angel Susan Cherian, Anju K Nair, Elsevier Publications, ISBN 9780443290640.

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- Attended a national **research workshop** on “ Mastering the art of science research proposal writing” held on July 27, 2024 organised by Sacred Heart Advanced Research Endeavour & IIC, in association with Indian National Young Academy of Science (INYAS)
- Attended ‘Shaping Kerala's Future an **International conclave**’ on next Gen Higher Education organized by the department of higher education, Kerala on Jan 14-15, 2025 at CUSAT.
- Completed the NEP 2020 Orientation & Sensitization programme under Malaviya Mission Teachers Training Programme (MM-TTP) of UGC organized by MMTTC Kannur University from 19.06.2024 to 28.06.2024.
- Participated in five day FDP on MGU UG Honours Syllabus Revision & OBE Training for the college and University Teachers conducted by the College Development Council, MGU from 13.11.2023 to 17.11.2023.
- Participated in UGC sponsored short term course in innovation and start-ups organized by Malaviya Mission Teachers Training Center (MMTTC) Kannur University from 15.10.2024 to 21.10.2024

#### Dr. Rajani Jacob-

Received Ph. D. Guideship from M.G. University.

#### Dr. Melvi Chandy -

- Participated in the two week online refresher course on “Materials for Energy and Sustainability” under MM-TTP of UGC organised by Malaviya Teacher Training Centre Centre for Science and Society IISER Bhopal from November 04 - 18 , 2024.
- Completed the NEP 2020 Orientation & Sensitization programme under Malaviya Mission Teachers Training Programme (MM-TTP) of UGC organized by MMTTC Kannur University from 19.08.2024 to 29.08.2024.

#### **Doctoral Degree**

Ms. Elizabeth Mathew (Guest Lecturer of Physics Department) has successfully defended her Ph.D. thesis at Kerala University and got awarded the doctoral degree.