

NEWSLETTER

Message from the Head of the Department



Faith is the compass that guides us through the uncertainties of life, the unseen force that propels us toward our highest aspirations. It is the quiet assurance that even in the darkest moments, light awaits us just beyond the horizon.

As we set off this academic year, themed around the profound virtue of faith, we are invited to explore the depths of belief and trust, not only in the divine but also in ourselves, in each other, and in the principles that govern our scientific missions. Faith, much like the unseen forces in physics, shapes our reality in ways that are often beyond immediate comprehension, yet it remains the foundation upon which we build our lives and our work. The Scripture reminds us in Hebrews 11:1, “Now faith is the substance of things hoped for, the evidence of things not seen”. This verse encapsulates the core of faith as both the foundation and the driving force of all that we endeavour to achieve. In a discipline such as ours, where the search for truth and understanding is supreme, faith plays a key role, reminding us that there is always more to discover, more to understand, and more to believe in, even when the path ahead is unclear. It is this resilient faith that will guide us through the complexities of our academic and personal lives, ensuring that we remain steadfast in our pursuit of knowledge and truth. As we journey through this “Year of Faith”, let us be mindful of the idiom, “Keep the faith”. It is essential that we hold fast to our convictions, trusting in the process, in each other, and in the ultimate outcome of our untiring efforts. By cultivating a spirit of faith within our department, we create an environment where hope, trust, and mutual support prosper, allowing us to achieve our fullest potential.

In conclusion, I offer my earnest wishes and blessings to each member of our department. May this year be one of not only academic achievement but also of spiritual growth and deepened faith. May the Almighty guide our steps, bless our endeavours, and strengthen our faith in all that we do.

With enduring blessings,

Dr. Sr. Jessie Fernando

Editorial Team

The erudite editorial team, comprising Dr. Sr. Jessie Fernando, Dr. Sr. A.S.J. Lucia Rose, Dr. S. Euchrista Immaculate Sylvia, Mrs. A. Lucas Rexceline, Dr. M. Sheeba and Ms. P. Dhanalakshmi has collaboratively crafted this newsletter with meticulous attention to detail and a keen eye for innovation. Their synergy has resulted in a publication that is at once informative, engaging, and visually stunning.

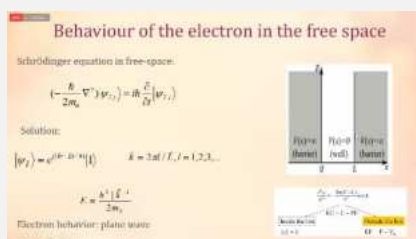
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Activities of the Association

The Physics Association has been instrumental in organizing a plethora of activities, that has benefited the students. These initiatives have not only augmented the academic experience but also nurtured a sense of community and camaraderie among the students.

Invited Talk

On September 27, 2021, Department of Physics conducted an online invited talk on science behind the nanotechnology in the light of quantum mechanics under the Star College Scheme sponsored by the department of Biotechnology, Ministry of Science and Technology, Government of India. Dr. M. Melvin David Kumar, Assistant Professor, Department of Physics, St. Xavier's College, Palayamkottai was the resource person. 95 members have participated in the talk.



Internship

The Department of physics arranged an internship programme on instrumentation at AVM hospital from the 1st of November 2021 to 10th of November 2021 under the star college scheme sponsored by the Department of Biotechnology, New Delhi. Five of our students attended the internship.



Faculty Development Program

A five days faculty development program was organized from 23rd to 27th November, 2021. The First day session on biomedical applications of Nanomaterials was held on 23.11.2021. The resource person Dr. P. Gopinath, Head Centre of Nanotechnology, Department of Biosciences and Bioengineering, Indian Institute of Technology Roorkee, Uttarakhand. The Second day session started off with the lecture on Palmyraculture: An insight into the role of Asian Palmyra palm in Nanoscience and Nano technology Biomedical applications of Nanomaterials was held on 23.11.2021. Dr.P. Mosae Selvakumar, Assistant Professor, Asian university of Women, Bangladesh. The third day session on Nanomaterials and its industrial Applications was held on 25.11.2021. Dr.

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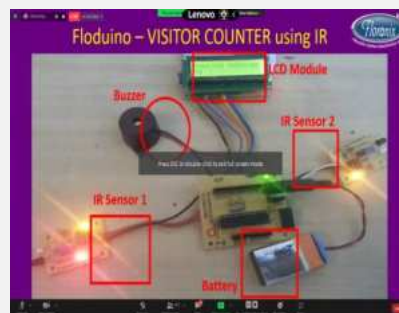
S. Senthil Velan, Associate Professor of Chemistry, Annamalai University, Chidambaram. The Fourth day session on UV-Vis Spectroscopy of Nanomaterials was held on 26.11.2021. Dr. Israel VMN Enoch, Professor & Technology Head, Centre for Nanoscience and Genomics, Karunya Institute of Technology and Sciences, Coimbatore. The Fifth day session on Micro - Nano Fabrication techniques and its application in sensors was held on 23.11.2021. The resource person Dr. P. Dinesh R Rotake, Research Associate, Electrical Engineering Department, IIT, Hyderabad.



National Webinar

The two days National Webinar on “Microprocessor and Microcontroller for College students” organised by the Department of Physics, Marian Star Centre, St. Mary’s College (Autonomous), Thoothukudi, sponsored by Department of Biotechnology, Government of India, New Delhi was held on 8th and 9th November 2021 at 2.30 pm through zoom platform. Dr. G. Kumar Sathiyam, Former Professor, Head Department of Physics & Academic

Dean, Madras Christian College, Tambaram, Chennai and Proprietor, Floranix, Chennai was the resource person on both days. Around 220 participants took part in the programme.



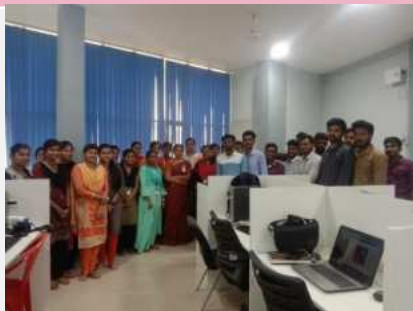
Internship

The department of Physics arranged an internship on ‘Solar Based Projects’ at Core Techno Solutions from 13.12.2021 – 23.12.2021 under the star college scheme sponsored by the Department of Biotechnology, New Delhi. The internship was headed by a proficient guide from Core Techno Solutions. Twelve students of III B.Sc. Physics attended the internship.

Internship

The department of Physics organised an internship on e-mapping in our college premises from 13.12.2021 – 22.12.2021 under the star college scheme sponsored by the Department of Biotechnology, New Delhi. The internship was headed by a proficient guide from Digisailor company. Eleven students of III B.Sc. Physics attended the internship.

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Lecture Cum Hands On Training

A three day intercollegiate lecture cum hands on training in Practical Physics was organized by department of physics under star college scheme from 15.12.2021 to 17.12.2021. The resource person was Mr. K. Balasubramanian, Industrialist, Rethan Machining Solutions, Tirunelveli. The total number of participants were about 120.



Invited Talk

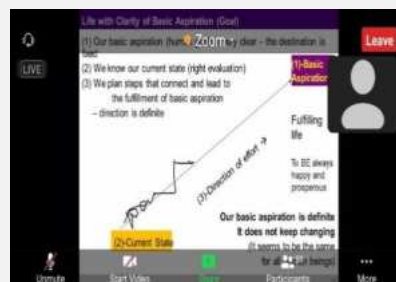
On January 22, 2022, an enlightening invited talk was organized on the Application of Physics in Health Sciences. The talk was compiled by the energetic mentors of the department of Physics, St. Mary's College (Autonomous), Thoothukudi under the Star College Scheme sponsored by the DBT, New Delhi. Mr. Pragadheeswaran Venkat, Entrepreneur and Founder Director, Aries

Biomed Technology Pvt Ltd, Coimbatore, India.



Webinar

On January 29, 2022, the webinar was organized on "Human Rights and Human Values". The webinar was orchestrated by the enthusiastic members of the School of Physical Sciences, St. Mary's College (Autonomous), Thoothukudi under the Marian Star Centre. Prof. Meena D.R. Associate Professor, Department of Chemistry, UHV and NEP Coordinator, Bangalore Institute of Technology, Bangalore.



Faculty Development Programme

A five day international faculty development programme on Smart Materials for New Technology was organized by department of physics under star college scheme from 18.02.2022 to 23.02.2022. Around 121 faculty participated enthusiastically.

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Hands on Training

A Hands on Training on “Crystal Growth” sponsored by DBT was organised by Marian Star Centre, St.Mary’s College (Autonomous), Thoothukudi on 14th February 2022 in the Physics lab. Dr. P. Sumithraj Premkumar, Assistant Professor, Department of Physics, St. John’s College, Palayamkottai was the resource person. Students of III B.Sc., Physics (5) and III B.Sc.,Chemistry (6) and II M.Sc., Chemistry students participated in the training.



Science Expo

A Science Expo was organized by the department of Physics, St.Mary’s College [Autonomous] in the Physics Lab under the DBT star scheme for the school students of grades 6 – 9 on 10.03.2022 and 11.03.2022.



Training For the School Teachers

An inservice training for the school teachers sponsored by the DBT star scheme on 25.03.2022 commenced with a prayer and a welcome address by Dr. Sr. Jessie, Head of the department of Physics. Around 25 Physics teachers enthusiastically participated.



CDP

Professors and students of the department of Physics, St. Mary’s College [Autonomous], Thoothukudi participated in the community development programme held on 10.10.2021 at Kuruvithurai village of Mukkani panchayat.



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Professors and students of the department of Physics, St. Mary's college [Autonomous], Thoothukudi participated in the community development programme held on 10.10.2021 at Kuruvithurai village of Mukkani panchayat and inaugurated the training on Aari Designing [Oct-Dec'21].



Professors and students of the department of Physics, St. Mary's college [Autonomous], Thoothukudi participated in the community development programme held on 17.10.2021 at Kuruvithurai village of Mukkani panchayat



Professors and students of the department of Physics, St. Mary's college [Autonomous], Thoothukudi participated in the community development programme held on 24.10.2021 at Kuruvithurai village of Mukkani panchayat.



The students of the department of Physics visited the adopted village Kuruvithurai on 18.12.2021 as a part of the Community Development Programme in collaboration with Unnat Bharat Abhiyan. 11 students of II B. Sc Physics trained the people on washing powder making.



The students of the department of Physics visited St. Antony's Higher Secondary School, Palayakayal for Physics Expo on 06. 04. 2022 as a part of the Community Development Programme in collaboration with Unnat Bharat Abhiyan. A total of 15 students from II B. Sc Physics from the college displayed their innovative talents.

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Lab Activities

The department has conducted 86 lab activities, offering students hands-on experience in experimental physics. These activities have not only sharpened their practical skills but also instilled in them a spirit of scientific inquiry and exploration.

Mentor-Mentee System

The Mentor-Mentee System has been a resounding success, with 36, 34 and 47 students of I, II, and III years respectively benefiting from the guidance and support of experienced faculty members. This initiative has created a nurturing environment that brings up academic growth, creativity, and innovation.

Value added courses:

The department has offered a career-oriented course on Circuit Board Design and Analytics for III-year students, with 47 students enrolled. This course has provided students with specialised knowledge and skills, thereby enhancing their academic and professional prospects.

MoU Activity

The department has signed MoUs with Digsailor on 12.11.2021 and Core Techno Solution on 23.11.2021, thereby developing collaborations and exchange programmes that strengthen research and academic opportunities.

Alumnae Meet

The Alumnae Meet, held on 23.04.2022, provided a platform for alumni to reconnect with the department, share their experiences, and forge meaningful connections with current students and faculty members.

PTA

The Parent-Teacher Association meeting, held on 09.04.2022 for the students of II years respectively has provided a platform for parents to engage with the department, share experiences, and forge meaningful connections.

BoS

The Board of Studies meeting, held on 26.02.2022, was attended by 3 external experts namely Dr. Sabarinathan Venkatachalam, Dr. Krishnabama, Mr. J.E. John Dalton and the department has successfully implemented the Choice-Based Credit System (CBCS) and Outcome-Based Education (OBE) framework. This has ensured a student-centric approach, flexibility, and accountability in the academic programme.

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Projects:

45 students from the III-year have completed 8 projects, demonstrating their research and problem-solving skills.

No. of E-Content

The department has developed 6 e-content resources for teaching and learning, thereby leveraging technology to enhance the academic experience.

Students' Achievements

Students have achieved numerous accolades, including 8 prizes in national and international competitions, showcasing their academic talent, creativity, and innovation.

- Ms. Sheela Varsha. A of II B.Sc Physics stood third prize in the Verse Writing Competition held on 25.02.2022
- Ms. Dhivya Dharshini. D of III B.Sc Physics has secured first prize in the Interdepartmental Quiz Competition held on 24.04.2022
- Ms. Jaffry. T of III B.Sc Physics stood second prize in the Interdepartmental Quiz Competition held on 24.04.2022
- Ms. Rohini. S of III B.Sc Physics stood third prize in the Interdepartmental Quiz Competition held on 24.04.2022
- Ms. Sakthi Maheswari. R of III B.Sc Physics stood fourth prize in

the Interdepartmental Quiz Competition held on 24.04.2022

- Ms. Philo Sahaya Shiny. P of III B.Sc Physics stood fifth prize in the Interdepartmental Quiz Competition held on 24.04.2022.

SPORTS

- Ms. V. Subha of I B.Sc Physics has secured second prize in the district level – Tennis Ball Cricket Championship held on 01-03-2022.
- Ms. L. Jenithra of I B.Sc Physics stood first prize in the district level – Beach kabadi held on 01-03-2022.

NCC

- Ms. Jaisla. G of II B.Sc Physics participated in the NCC Unit on International Yoga Day held on 21.06.2021.
- Ms. Jaisla. G of II B.Sc Physics participated in the NCC- Annual Training Camp held on 29.11.2021 – 03.12.2021.

Higher Education:

34 students have pursued higher education, reflecting the department's strong reputation, and commitment to student success.

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Participation in

RC/OC/Seminars/WS

Faculty members have participated in numerous conferences, seminars, and workshops, engaging with peers, sharing research findings, and staying abreast of developments in physics.

Dr. Sr. Jessie Fernando attended the followings

- International FDP on the topic Emerging Trends in Science and Technology from 01.07.2021 to 06.07.2021
- National FDP on the topic ICT Tools for E- Content Making from 27.07.2021 to 28.07.2021
- International FDP on the topic Innovative Trends in Science and Technology from 26.07.2021 to 31.07.2021
- State Workshop on the topic Thin films and Nanomaterials (IWTN-2021) from 09.08.2021 to 20.08.2021
- State FDP on the topic Cultivation of Research Excellence to Enhance Innovations and Professional Development from 01.11.2021 to 02.11.2021
- Five Days International Online FDP on the topic Emerging Trends in Nano Technology (ETNT -2021) from 09.11.2021 to 13.11.2021

- Five Days International FDP on the topic Nanomaterials from 23.11.2021 to 27.11.2021
- Two Day Online FDP on the topic Condensed matter Physics from 24.01.2022 to 25.01.2022
- One Week Online FDP on the topic Exploring New Frontiers in chemical and Biological Science from 31.01.2022 to 05.02.2022
- Five Days International FDP on the topic Smart Materials for New Technology from 18.02.2022 to 23.02.2022
- International Conference on the topic Emerging Materials and It's Application (ICEMA – 2022) on 01.03.2022
- Five day International Workshop on the topic Theme Centred Interaction from 22.01.2022 to 26.01.2022

Dr. Sr. A.S.J. Lucia Rose attended the followings

- Conference on the topic Advances in Physics on 27.07.2021 and 28.07.2021.
- Two days FDP on the topic Cultivation of Research Excellence to Enhance Innovations and Professional Development on 01.11.2021 and 02.11.2021.

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- Five days International FDP on the topic Nanomaterials on 23.11.2021 - 27.11.2021
- Five days International FDP on the topic Smart Materials for New Technology on 18.02.2022 - 23.02.2022
- International Conference on the topic Emerging Materials and It's Application (ICEMA – 2022) on 01.03.2022.

Dr. S. Euchrista Immaculate Sylvia attended the followings

- Five days FDP on the topic Synthesis, Characterization and Applications of Novel Materials from 02.08.2021 to 06.08.2021
- International e-conference on the topic Recent Trends in Applied Physics on 28.10.2021
- Five Days International Online FDP on the topic Emerging Trends in Nano Technology (ETNT-2021) from 09.11.2021 to 13.11.2021
- Five Days International FDP on the topic Nanomaterials from 23.11.2021 to 27.11.2021
- One Week Online FDP on the topic Exploring New Frontiers in chemical and Biological Science from 31.01.2022 to 05.02.2022.
- Five Days International FDP on the topic Smart Materials for New

Technology from 18.02.2022 to 23.02.2022

- International Conference on the topic Emerging Materials and It's Application (ICEMA – 2022) on 01.03.2022.

Mrs. A. Lucas Rexceline attended the followings

- National Level online workshop on the topic E – Content development from 07.06.2021 to 12.06.2021.
- FDP on the topic Digital Tools for Active Teaching, Evaluation and Research from 28.06.2021 to 30.06.2021.
- National FDP on the topic Synthesis, Characterization and Applications of Novel Materials from 02.08.2021 to 06.08.2021.
- Five Days International Faculty Development Programme on the topic Nanomaterials from 23.11.2021 to 27.11.2021.
- One Week Online Faculty Development Programme on the topic Exploring New Frontiers in chemical and Biological Science from 31.01.2022 to 05.02.2022.
- Five Days International Faculty Development Programme on the topic Smart Materials for New Technology from 18.02.2022 to 23.02.2022.

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Dr. M. Sheeba attended the followings

- One week Virtual National FDP on the topic Innovation and IPR from 21.06.2021 to 27.06.2021.
- One Week Online FDP on the topic Emerging Trends in Thermal and Renewable Energy Systems from 28.06.2021 to 02.07.2021.
- National Level FDP on the topic Advance Topics in Physics from 12.07.2021 to 17.07.2021.
- National FDP on the topic Recent Research Advances Materials: Water and Waste Water Treatment from 02.08.2021 to 07.08.2021.
- Two weeks International workshop on the topic Emerging Trends in the field of Science and Technology from 16.08.2021 to 28.08.2021.
- Five Days International Faculty Development Programme on the topic Nanomaterials from 23.11.2021 to 27.11.2021.
- Two Day Online Faculty Development Programme on the topic Nanomaterials from 24.01.2022 to 25.01.2022.

Mrs. P. Dhanalakshmi attended the followings

- Short Term Training Program on the topic Materials Synthesis, Characterisation Techniques and

Data Analysis Tools for Research Beginners from 25.10.2021 to 30.10.2021.

- FDP on the topic Cultivation of Research Excellence to Enhance Innovations and Professional Development from 01.11.2021 to 02.11.2021.
- National FDP on the topic ICT Tools for E-content Making from 25.10.2021 to 29.10.2021.
- International FDP on the topic Soft Skills for Capacity Building from 08.11.2021 to 12.11.2021.
- International FDP on the topic Emerging Trends in Nano Technology (ETNT-2021) 09.11.2021 to 13.11.2021.
- FDP on the topic Academic Research Writing from 13.11.2021 to 19.11.2021.
- FDP on the topic Enhancing Administrative Efficiency in HEI's from 16.11.2021 to 22.11.2021.
- International FDP on the topic Nanomaterials from 23.11.2021 to 27.11.2021.
- International FDP on the topic Smart Materials for New Technology from 18.02.2022 to 23.02.2022.
- International Conference on the topic Emerging Materials and It's

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- Application (ICEMA – 2022) on 01.03.2022.

Awards

Dr. Sr. A.S.J. Lucia Rose has received the following Awards

- BHARAT SHIKSHA RATAN AWARD for Outstanding Achievements and Remarkable Role in the Field Of Education at New Delhi on 9th September 2021.
- BEST PRINCIPAL PERFORMANCE AWARD FOR EDUCATION EXCELLENCE WITH MEDAL in the National Seminar on Individual Contribution for Economic and Social Development by Intellectual Peoples Foundation, New Delhi on 1st October 2021.