

# NEWSLETTER

## Message from the Head of the Department



“Gratitude, that rarest of virtues, is the quiet acknowledgment of grace, a balm for the soul, and the wellspring from which all blessings flow”. As we kick start this academic year, devoted to the dignified theme of gratitude, we are gestured to elevate our consciousness to a plane where thankfulness is not merely a transient emotion but a reflective state of being. In the ever-accelerating pace of life, it is all too easy to overlook the myriads of blessings that grace our paths.

The Holy Scripture resounds with the wisdom of gratitude, as articulated in Colossians 3:15: “And let the peace of Christ rule in your hearts, to which indeed you were called in one body; and be thankful”. This verse motions us to allow gratitude to govern our hearts, for it is in gratitude that we find peace, and in peace, we find the strength to persevere, to create, and to excel.

As we traverse this “Year of Gratitude”, let us be ever mindful of the aphorism, “Ingratitude is the worst of sins”. It is through the cultivation of a grateful heart that we guard against the corrosive forces of envy, entitlement, and discontent. By nurturing a spirit of gratitude within our department, we create a sanctuary where positivity, collaboration, and innovation flourish, and where everyone is valued and celebrated for their unique contributions.

In conclusion, I extend my most heartfelt wishes and blessings to each member of our esteemed department. May the Almighty bestow upon us the grace to recognise and appreciate the innumerable blessings that surround us, and may our lives be a testament to the transformative power of gratitude.

With abiding 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, Dr. Sr. Jessie Fernando, 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.

# NEWSLETTER

## 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.

### ASSOCIATION MEETING

On 27.08.2022, an Association Meeting was organized on the “Road Map to Research”. Dr. A. Murugeswari, Assistant Professor, was a resource person. Around 176 students participated enthusiastically.



### HANDS ON TRAINING

From 07.09.2022 to 09.09.2022, a Three Day Lecture cum Training on the topic, “Physics based computer literacy”. Mr. B. Veerabahu, was the resource person. 33 students participated enthusiastically.

### PHYSCOM 2022

On 19.10.2022, a Quiz Competition “PHYSCOM 2022” was organized by the department of Physics for the higher secondary school students from various schools in and around Thoothukudi. Around 15 schools / teams participated.



### HANDS ON TRAINING



From 07.11.2022 to 09.11.2022, a Three day Hands on Training on the topic, “Advanced topics in C++”. Mr. B. Veerabahu, 33 students participated enthusiastically.



# NEWSLETTER

## MOTIVATIONAL TALK

On 10.11.2022, a Motivational Talk on the topic “My Story - As a successful Start-up founder” was jointly organized by the department of Physics and Institution’s Innovation Council. Mr. R. Meenakshi Sundaram was the Resource person. Around 100 students attended the session.

## IN-HOUSE TRAINING



From 19.12.2022 to 22.12.2022, a Three Day In-House Training on “Physics Practicals” for all UG physics students. The faculties of the department of Physics were the resource persons. Around 100 students were benefited by this programme.

## WORKSHOP

On 30.01.2023, a One Day Lecture cum Workshop on “Cost Effective Methods for Thin Film Preparation” Dr. M. Karunakaran, was the resource person. 68 students attended the programme and were benefited.



## HANDS ON TRAINING



On 02.02.2023, a Lecture cum Hands on Training on the topic, “Learn to engineer the growth of crystalline and nanoscale materials” Dr. P.Rajesh, Assistant Professor, Department of Physics, SSN College of Engineering, Chennai graced the session. Around 100 students attended the training.

## COMMUNITY DEVELOPMENT PROGRAMME (CDP)

- On the 75th Independence Day (15.08.2022), as part of the CDP in collaboration with Unnat Bharat Abhiyan, our Physics students joined the people of Mukkani Panchayat in hoisting the National Flag. Dr. A. M.



# NEWSLETTER

Sonal, Assistant Professor of Tamil, gave a speech on the importance of flag hoisting.

- On 12.11.2022, as part of the Community Development Programme, our Physics students celebrated Children's Day in Kuruvithurai, Mukkani. The event included an awareness talk, games, cultural performances, and prize distribution, engaging the village school students in a day of joyful activities.



- On 26.01.2023, our Physics students celebrated Republic Day in Kuruvithurai, Mukkani Panchayat, by organizing an eye camp in collaboration with Vasan Eye Care Hospital. The students also participated in the Grama Sabha meeting, identifying and noting the community's needs.



## Lab Activities

The department has conducted 94 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 28,36 and 34 students of I, II, and III years respectively benefiting from the guidance and support

## Alumnae Meet

The Alumnae Meet, held on 11.03.2023, 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 13.02.2023, 5.11.22 and 17.09.22

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 Website Designing for III-year students, with 33 students enrolled respectively. These courses have provided students with specialised knowledge and skills, thereby enhancing their academic and professional prospects.

for the students of I, II, and III 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 19.4.2023 was attended by 4 external experts namely Dr. R. Mary Mathelane,

# NEWSLETTER

Dr. P. Selvarajan, Dr. Karpagavalli, Mr. F. Franko Vaz and the department has successfully implemented the Choice-Based Credit System (CBCS) and

## **Educational Tour/IV:**

- 52 students have participated in the educational tour to “Vikram Sarabhai Space Museum” on 30.9.2022 gaining valuable insights into networking opportunities, and practical experience.
- 21 students have participated in the industrial visit to “Tuticorin Airport” on 10.9.2022 gaining valuable insights into industry practices,

## **Projects:**

33 students from the III-year have completed 6 projects, demonstrating their research and problem-solving skills.

## **Students' Achievements**

Students have achieved numerous accolades and prizes in academic and sports events showcasing their academic talent, creativity, and innovation.

- Ms. A.Sheela Varsha. of II B.Sc Physics stood second prize in the inter college quiz Competition held on 3.08.22
- Ms. P. Hemalatha, Ms. X. Andrine Snowba, Ms. M.Kalaiselvi, Ms k.shobana, Ms. A.Narkees Fathima, Ms. S.Dhanalakshmi, Ms C.StellaRani, Ms. T.kapsigeetha , Ms

Outcome-Based Education (OBE) framework. This has ensured a student-centric approach, flexibility, and accountability in the academic programme.

networking opportunities, and practical experience



A. Reshma Angeline, Ms M. GaneshaVarasini of I B.Sc Physics bagged the first prize in the state level Rangoli Competition held on 2.12.2022

- Ms. A. Narkees Fathima of I B.Sc Physics stood first prize in the inter department glass painting Competition held on 15.12.22
- Ms S. Mahalakshmi of III B.Sc Physics stood third prize in the inter department aari work Competition held on 15.12.22
- Ms C. Mariammal of III B.Sc Physics stood first prize in the inter department art from waste Competition held on 15.12.22

# NEWSLETTER

- Ms A. Jenifer Anitra of III B.Sc Physics stood second prize in the inter department collage Competition held on 15.12.22
- Ms R. Maria keba , Ms R. RiczyChils and Ms A. Mary Miraculin of III B.Sc Physics bagged the second prize in the inter department Western voice Competition held on 15.12.22
- Ms S. V. Shunmuga Priya of III B.Sc Physics stood first prize in the inter department Pencil drawing Competition held on 15.12.22
- Ms P. M. Preetha and Ms K. Thareneya of III B.Sc Physics bagged the third prize in the inter department Flower Arrangement Competition held on 16.12.22
- Ms G. M. Nithiya Sri and Ms N. Varsha of III B.Sc Physics bagged the first prize in the inter department Photography Competition held on 16.12.22
- Ms N. Varsha of III B.Sc Physics stood first prize in the inter college on spot Photography Competition held on 23.1.23

## SPORTS

- Ms L. Jenithra of II B.Sc Physics stood first prize in the inter college Kho-Kho Competition held on 1.2.2023
- Ms. L. Jenithr and Ms S. Nechia Vijiyatharshini of II B.Sc Physics bagged the first prize in the district level Kabadi Competition held on 4.2.2023
- S. Nechia Vijiyatharshini of II B.Sc Physics was secured the second prize in the State level Table Tennis Doubles Competition held on 1.2.2023
- Ms B. Neciha Vijayadharshini of II B.Sc Physics stood first prize in the District level Football Competition held on 22.2.2023

## Higher Education:

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

## Research Publication/Presentation

The faculty members have published 13 research papers in Scopus-indexed journals, underscoring the department's

commitment to academic excellence, research, and knowledge dissemination.

**Dr. Sr. Jessie Fernando** has published following research papers

- Thermo- acoustic studies of ethyl propionate with propan-2-ol at different temperatures using ultrasonic technique in the *Materials Today: Proceedings*.

# NEWSLETTER

- Comparative Analysis of Commercial and Herbal Extorted Cough Syrups in Tamilnadu (South India) Zone - An Investigation by Methodologies of Spectral Way and High Frequency (Ultrasonic) Waves to Predict Samples Efficacy in the *AIP Conference proceedings*.
- Molecular Interaction in Binary Mixtures of Benzyl propionate with methanol at different temperatures: An Ultrasonic study in *Neuroquantology*.
- Vicker's hardness, elastic stiffness fracture toughness, hardness in mohs scale, young's modulus and yield strength measurement of BaSiF6:Eu2+ phosphors in the *AIP Conference Proceedings*.
- Enactment by computational-structural and by the experimental studies of 2-hydroxyimino-2-(pyridin-2-yl)-N'-[1-(pyridin-2-yl)ethylidene] acetohydrazide – HIPYPYEAH crystalline specimen in the *AIP Conference Proceedings*.
- Physico-Chemical Characterization of Ethyl Propionate with Butanol at Different Temperatures Using Ultrasonic Technique in the *Macromolecular symposia*.
- Evaluation of Sound Velocity and Molar Refraction in Binary Liquid Mixtures through Ultrasonic Measurement in the *Macromolecular symposia*.
- Opto electronic filter effectiveness by influx of macro, thin film and nano scalings stress analysis of trapezoidal and spiral coated device characterizations of Eu2+ doped barium hexafluorosilicate (BaSiF6:Eu2+) phosphors in the *AIP Conference Proceedings*
- Extortion, anti-bacterial, spectral, band gap and ultrasonic factors of herbal cough syrup and content comparison with commercial samples in the *AIP Conference proceedings*.
- Study of acoustical parameters of bioactive compound with benzyl propionate using ultrasonic technique in the *AIP Conference proceedings*.

**Mrs. A. Lucas Rexceline** has published a research paper titled "Thermo-acoustic Studies of Ethyl Propionate with Propan-2-ol at Different Temperatures Using Ultrasonic Technique" in the journal *Materials Today: Proceedings*.

**Dr. M. Sheeba** has published following research papers

- Analytical Study of deposition of TiO<sub>2</sub> and SiO multilayers for blue color display in the **AIP Conference Proceedings**.
- Studies on ZnS thin films synthesized by nebulizer spray pyrolysis technique

# NEWSLETTER

for solar cell applications in the AIP

**Conference Proceedings.**

## **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. A.S.J. Lucia Rose** participated in the National Seminar on the topic Recent Trends and Challenges in Higher Education on 15.10.2022

**Dr. Sr. Jessie Fernando** attended the following

- The Five day International Workshop on the topic Theme Centred Interaction on 22.01.2023 – 26 .01.23
- The One day National FDP on the topic Blooms Taxonomy in Teaching and Learning on 16.02.2023
- The International FDP on the topic Advanced Materials for Technological Applications on 24.3.2023-4.4.2023

**Dr. S. Euchrista Immaculate Sylvia** participated in the Online webinar on the topic Webinar on Nanomaterials for Novel Applications on 13.1.2023

**Mrs. A. Lucas Rexcelin** participated in Five Days (online) Faculty Development Programme on the topic FDP on “Nanomaterials for sustainable Future” on 12.12.2022-16.12.2022

**Dr. M. Sheeba** participated in the World Record Programme through online on the topic Multilingual Thirukkuural World Record Programme on 15.08.2022 - 10.10.2022