


# Auxilium College (Autonomous) - Vellore- 6

## PG and Research Department of Physics – “Physicos” Domain Club



### Activities

#### 19<sup>th</sup> July 2024 – “Association Inauguration – Resource Talk”


The physics Association Inauguration for the academic year 2024 – 2025 was conducted on 19<sup>th</sup> August 2024 at computer block Seminar Hall. Dr. Ramesh Thamankar Associate Professor, Centre for functional materials division, Vellore Institute of Technology, Vellore was invited as a chief guest. Dr. Ramesh Thamankar delivered an insightful keynote address focusing on recent advancements in the field of functional materials and their applications in modern technology. He also explained about functional materials and their properties and applications in quantum computing, energy storage and electronics. He also shared his experiences and ongoing research projects at the centre for functional materials division, VIT, Vellore. He also motivated the students to peruse higher studies and research work. The student put forth their queries to the speaker. This event was concluded with vote of thanks by Dr. R. Sarjila, Assistant Professor of physics, Auxilium College and the session was ended with college anthem.



**AUXILIUM COLLEGE (Autonomous)**  
(Accredited by NAAC with A+ Grade in the 4<sup>th</sup> Cycle)  
Gandhi Nagar, Vellore-632006



**Inauguration of Physics Association**  
Department of Physics  
on Friday, 19<sup>th</sup> July 2024 at 2.00 p.m.



**Resource Person**  
**Dr. Ramesh Thamankar, Ph.d.**  
Associate Professor  
Centre for Functional Materials  
Vellore Institute of Technology, Vellore


**Patron**  
Dr. (Sr.) Mary Josephine Rani A.  
Secretary

**Convener**  
Dr. (Sr.) Arokia Jayaceli A.  
Principal

**Co-Conveners**  
Dr. (Sr.) Amala Valarmathy A.  
Dr. (Sr.) Sumathi M.  
Vice Principals (Shift I & II)

**Coordinator**  
Dr. (Sr.) Venci X.  
Head & Assistant Professor  
Department of Physics

**Organizing Secretaries**  
Dr. N. R. Devi  
Dr. R. Sarjila  
Assistant Professors  
Department of Physics


 **Computer Block Seminar Hall**

All are Cordially Invited




## **22<sup>nd</sup> July 2024 - “A Guest Lecture on Inspiring Experiences of Rocket Science”**

The event was organized by the PG and Research Department of Physics, Chemistry and Mathematics. Dr. D.S. Antuvan, Senior Scientist, ISRO delivered an engaging and inspiring lecture, sharing his journey and experiences in rocket science. His lecture covered various aspects of the field, from the fundamental principles of rocket design to the challenges faced in space missions. Dr. Antuvan began by narrating his career path, starting from his early days as a young scientist to becoming a senior scientist in the field of rocket science. His stories of perseverance and dedication were truly motivational. He delved into the technical aspects of rocket science, explaining the principles of rocket propulsion, aerodynamics, and the importance of materials science in designing efficient rockets. Dr. Antuvan concluded his lecture with a discussion on the future prospects of rocket science, encouraging the next generation of scientists to pursue careers in this exciting field and contribute to the advancements in space technology.. The lecture was a resounding success, leaving the audience inspired and motivated to explore the fascinating field of rocket science.


**Auxilium College (Autonomous)**  
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 Gandhi Nagar, Vellore 632 006


**PG & Research Department of  
 Physics, Chemistry, Maths  
 Organizes**

**A Guest Lecture on  
 INSPIRING EXPERIENCES OF ROCKET SCIENCE**



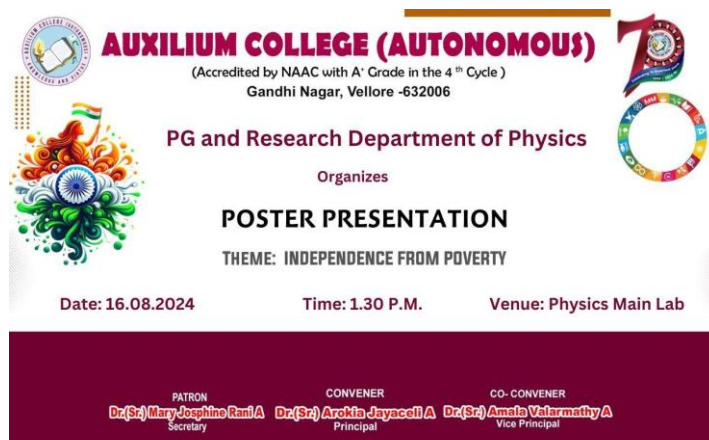
By  
**Dr. D.S. ANTUVAN**  
 Senior Scientist - ISRO (Retd)

DATE: 22.07.2024  
 TIME: 9.00 - 10.30 AM  
 VENUE  
**AUDITORIUM**




## 16<sup>th</sup> August 2024 – Poster Presentation – “Independence from Poverty”

The PG and Research Department of Physics, Auxilium College (Autonomous), Vellore, successfully organized a poster competition on 16th August 2024. The event was conducted under the theme “Independence from Poverty”, aiming to create awareness and encourage innovative ideas among students regarding socio-economic development. The programme commenced with a brief introduction highlighting the significance of the theme and the role of youth in addressing poverty-related challenges. Students actively participated by presenting creative and informative posters that reflected various dimensions of poverty, including education, employment, sustainability, and technological advancements. Dr.K.Vidhya, Assistant Professor, Department of Zoology served as judge for this poster presentation competition. The posters were evaluated based on originality, clarity of concept, relevance to the theme, and presentation skills. The participants demonstrated commendable effort, creativity, and analytical thinking in conveying their ideas effectively. The Poster Presentation provided a valuable platform for students to express their perspectives, enhance their communication skills, and develop social awareness. The event concluded with the announcement of winners and a note of appreciation for all participants. Overall, the programme was a great success, fostering creativity, critical thinking, and social responsibility among students.



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Gandhi Nagar, Vellore -632006

PG and Research Department of Physics  
Organizes

**POSTER PRESENTATION**  
THEME: INDEPENDENCE FROM POVERTY

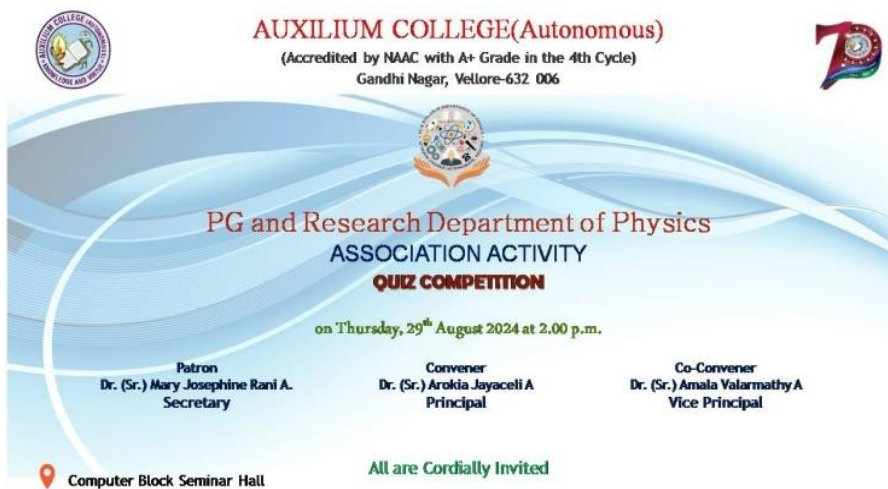
Date: 16.08.2024      Time: 1.30 P.M.      Venue: Physics Main Lab

PATRON: **Dr.(Sr) Mary Josephine Rani A**, Secretary  
CONVENER: **Dr.(Sr) Arokin Jayaceli A**, Principal  
CO- CONVENER: **Dr.(Sr) Amala Valarmathy A**, Vice Principal



## 29<sup>th</sup> August 2024 – “ Quiz Competition ”

As a part of Association Activity the Quiz Competition in general physics was organized by PG and research department of physics on 29<sup>th</sup> August at 2:00 pm in Computer Block Seminar Hall. This event is aimed to foster a spirit of learning and competition among students and to enhance their knowledge in the field of physics. The questions were asked from general topics of physics. Quiz was conducted in five rounds with six members in each group. The first round was to identify maximum number of physics related words from puzzle. The second round the questions were asked related to space exploration. The third round is a riddle. The fourth round is to identify the correct physics terms from jumbled words. The last round of the competition is identifying the scientist name and their discovery. The students actively participated. All the rounds were played in the correct manner by making the students to be attentive and testing their knowledge. At last the results were declared. The event concluded by the vote of thanks.



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Gandhi Nagar, Vellore-632 006

**PG and Research Department of Physics**  
**ASSOCIATION ACTIVITY**  
**QUIZ COMPETITION**

on Thursday, 29<sup>th</sup> August 2024 at 2.00 p.m.

**Patron**  
Dr. (Sr.) Mary Josephine Rani A.  
Secretary

**Convener**  
Dr. (Sr.) Arokia Jayaceli A.  
Principal

**Co-Convener**  
Dr. (Sr.) Amala Valarmathy A.  
Vice Principal

**All are Cordially Invited**

Computer Block Seminar Hall



## 12<sup>th</sup> September 2024 – “International Conference on Emerging Trends in Material Science and Applications”

International Conference on Emerging Trends in Material Science and Applications (ICEMA-2024) was organized by PG and Research Department of Physics on 12<sup>th</sup> September 2024. The first technical session I was started at 11.30 a.m. **Dr. Koteswara Rao Bonnisetti**, Head, Central Instrumentation Facility (CIF), Associate Professor, Department of Physics, IIT, Tirupathi, Andhrapradesh delivered a speech on the topic of “Unconventional Physics of Highly Frustrated Magnets”. His lecture shed light on the peculiar and often counter-intuitive properties of these materials, which could have implications for quantum computing and other advanced technologies. Technical session II was started at 12.30 p.m. Dr. Martin Britto Dhas, Joint Professor, Brain Pool Fellow, Shock waves and Gas Dynamics Laboratory, Department of Mechanical Engineering Keimyung University, Daegu, South Korea delivered a speech on “Acoustic Shock Waves: Technical session III was started at 2.15 pm after lunch. The session started with a speech on Nano-Dimensional Thin Films – Fundamentals and Applications” by **Dr. D. Paul Joseph**: Associate Professor, Department of Physics, NIT Warangal, Telangana, India. Finally, the Valedictory session of the conference was started at 5.00 pm. This session was presided by Dr. Nisha Santhakumari, Associate Professor (Retd.), PG & Research Department of Physics, Auxilium College (Autonomous), Vellore, Tamil Nadu, India. The prize winner for oral presentation was announced and they were honored by the chief guest with memento. The certificates were distributed to all the participants.

### ORGANIZING COMMITTEE

#### CHIEF PATRON

**Dr. (Sr.) Mary Josephine Rani. A**  
Secretary

#### PATRON

**Dr. (Sr.) Arokia Jayaceli. A**  
Principal

#### CO-PATRON

**Dr. (Sr.) Amala Valarmathy .A**  
Vice-Principal

#### CONFERENCE CO-ORDINATORS

- Ms. Mary Jamila .R
- Dr. Devi N.R.
- Dr. Sarjila. R
- Dr. Priyadharshini. A
- Dr. Lakshmi N.V
- Dr. Reena Devi .S
- Dr. Deepapriya .S
- Dr. Saranya P.E



### EMINENT SPEAKERS

**Dr. Martin Britto Dhas**  
Joint Professor, Brain Pool Fellow  
Shock waves and Gas Dynamics Laboratory  
Department of Mechanical Engineering  
Keimyung University  
Daegu, South Korea.

**Topic: “Acoustic Shock waves: A cutting - Edge tool for Advanced Bio- Medical Applications”**

**Dr. D. Paul Joseph**

Associate Professor  
Department of Physics  
NIT Warangal, Telangana.

**Topic: “Nano-dimensional thin films – Fundamentals and Applications”**

**Dr. Koteswara Rao Bommisetti**  
Head, Central Instrumentation Facility (CIF)  
Associate Professor  
Department of Physics  
IIT, Tirupathi, Andhrapradesh.

**Topic: “Unconventional physics of Highly Frustrated Magnets”**

### VALEDICTORY ADDRESS

**Dr. P. Nisha Santhakumari**  
Associate Professor (Retd)  
PG & Research Department of Physics  
Auxilium College (Autonomous)  
Vellore - 06

### ADDRESS FOR CORRESPONDENCE

**Dr. (Sr) Venci. X**  
Convenor – (ICEMA-2024)  
Head, PG & Research Department of Physics  
Auxilium College (Autonomous), Gandhi Nagar,  
Vellore – 632006.

Phone: 0416-2241774; 9488706608  
Email ID: icemaphy24@gmail.com

The poster features the logos of the organizing institutions and the conference title. It includes the date 12.09.2024 and a background image of a periodic table with a molecular structure overlay.

**Auxilium College**  
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**PG and Research Department of Physics**

**25**  
Silver Jubilee of Undergraduate Course (1999 - 2024)  
Decennial of Postgraduate Course (2014 - 2024)

**International Conference on  
Emerging Trends in Material Science and  
Applications  
(ICEMA - 2024)**

**12.09.2024**

We, the Management, the Principal, and the faculty members of the Physics Department cordially invite the faculty members, Research Scholars, PG Students and final year UG students of physics and chemistry of your institution to participate in the ICEMA-2024 conference.

### ABOUT COLLEGE AND DEPARTMENT

Auxilium College, founded in 1954, is the first women's college in the North Arcot district and now it is affiliated to the Thiruvalluvar University. The UGC and the Thiruvalluvar University have granted Auxilium autonomy from 2007-2008. It is a minority institution, established and administered by the daughters of Mary Help of Christians commonly known as Salesian sisters of Don Bosco, belonging to the Catholic Church.

THE MOTTO: "KNOWLEDGE AND VIRTUE"

The main goal of the college is to produce in a Salesian atmosphere, integrally formed young women who will be agents of social transformation in today's India.

The physics department has been functioning since the beginning of the college and major Physics (UG) was started in 1999 and PG in 2014. Recently, it has been upgraded has a research department.

### ABOUT ICEMA-2024

The International Conference on Emerging Trends in Material Science and Applications will be a crucial forum for discussing the latest advancements in material science. Aimed at bridging technological innovations with practical applications, the conference will foster new research and collaborations. Attendees will engage in discussions, share insights, and explore future trends, contributing to the field's advancement.

This event offers a unique opportunity to present work, exchange ideas, and network with peers, inspiring future studies and innovations in material science. Join us to participate in this dynamic exchange of knowledge and contribute to the field's evolution.

### TOPICS COVERED

- Advanced Materials Science
- Crystal Growth & Applications
- Nanomaterials, Technology & Applications
- Supercapacitors and Batteries
- Nonlinear Optical (NLO) Materials
- Medical Physics
- Quantum Dot and Applications
- Solar Cell Applications
- Thermoelectric Materials & Applications
- Optical Materials, Sensors, and Devices
- Energy Materials and Devices
- Ceramic and Composite Materials
- Polymers
- Luminescent Materials
- Dielectric Materials
- Thinfilm Technology

In addition to these topics, other specific applications of next-generation materials and devices are also welcome.

### CALL FOR PAPERS

Abstracts will be published in the conference proceedings with an ISBN.

### CALL FOR ABSTRACTS

We invite abstracts of your valuable research papers aligned with the conference theme. Submissions are welcome in both online and offline formats. Please ensure that your abstract is between 300 - 400 words, formatted in MS Word, using Times New Roman font, size 12. Kindly submit your abstract through the Google form provided in this invitation.

### IMPORTANT DATES

Last date for registration : **08.09.2024**  
 Last date for sending abstract : **08.09.2024**  
 Acceptance Notification to authors : **10.09.2024**

To encourage young researchers, Best Oral/Poster awards for the outstanding presentation will be awarded and all registered participants will receive the certificates in the conference.

### REGISTRATION

#### REGISTRATION FEE DETAILS

UG / PG Students : **Rs. 200**  
 Research Scholars/ Faculty : **Rs. 300**  
 Industrialists : **Rs.500**

The registration fee includes conference kit & working lunch.

Spot registrations is also permitted.

#### REGISTRATION FORM

Scan here to get registration form



Online registration Form

<https://forms.gle/Jhfd8NZTeppAYS8M9>

#### ACCOUNT DETAILS

Account Name : All Departments  
 Account number: 168301000020931  
 IFSC Code: IOBA0001683  
 Bank Name: Indian Overseas Bank  
 Branch Name: Auxilium College





## இயற்பியல் முதுகலை மற்றும் ஆராய்ச்சித் துறை நடத்திய பன்னாட்டு கருத்தரங்கம்



வேலூர், செப். 14  
வேலூர் மாவட்டம் ஆக்ஸிலியம் கல்லூரி  
எனில் 70 ஆவது ஆண்டை  
முன்னிட்டு இயற்பியல்  
முதுகலை மற்றும்  
ஆராய்ச்சித் துறை நடத்  
திய பன்னாட்டு கருத்த  
ரங்கம் திகழ்ச்சி நடை  
பெற்றது.

கருத்தரங்கத்தலைப்பு  
வளர்த்து வரும் அறிவி  
யல் செயல்பாடுகள் மற்  
றும் அதன் பயன்பாடுகள்  
என்பதாகும். இந்நிகழ்  
வில் சிறப்பு விருந்தினராக  
முனைவர் டி. பி. பி.  
ஜோசப் இணைப்பேராசி  
ரிகள், இயற்பியல்துறை  
தேசிய தொழில்நுட்ப  
நிறுவனம், வாரங்கல்  
தெருக்கானா அவர்க  
ளும், முனைவர் எஸ். எ.  
மாண்டியன் மீர்ட்டோ  
தாள், பனாரஸ் யூன்  
பெய்செலாஷாக் வேய்ஸ்  
மற்றும் கேல் டைவ

மிக்ஸ் ஆல்வகத்துறை,  
இயந்திரவியல் தொழில்  
நுட்பத்துறை கீமியல்  
பக்கவைக்கழகம், டெ.கு.  
தெய்கொரியா(இணைய  
வழி), முனைவர் கோட்  
டில்வர ராய் போய்ம்  
செட்டி தலைவர், மத்திய  
கருவியாக்கவாநிமையம்  
இணைப்பேராசிரியர்,  
இயற்பியல்துறை, தேசிய  
தொழில்நுட்ப நிறுவ  
னம். திருப்பதி ஆந்திர  
பிரதேசம் ஆகியோர்  
கலந்துகொண்டு சிறப்  
புரை ஆற்றினர்.




மாணவிகள் கல்வியில்  
சிறந்த ஆய்வு மனப்பான்  
மைபுடன் திகழ வேண்  
டும் என்றும் இவர்கள்  
ஆலோசனைகள் வழங்கி  
யார்.

கல்லூரி செயல்  
முனைவர் அருட்சகோ  
தரி மேரி ஜோஸ்யின்  
ராணி கல்லூர் முதல்வர்  
முனைவர் அருட்சகோ

தரி.அ. ஆரோக்ஷி ஜெய  
சீலி தேர்வாணையர்  
மற்றும் இயற்பியல்  
துறைத் தலைவர் முனை  
வர் அருட்சகோதரி  
வேள்ரி ஆகியோர் முன்  
விவை வகித்தார்  
திகழ்ச்சியில், பக்  
வேறு கல்லூரிகளைச்  
சேர்ந்த ஆய்வு மாணவர்  
கள், பேராசிரிய பெருமக்  
கள் கலந்துகொண்டனர்.  
நெற்பாள ஆய்வுக் கட்டு  
ரைகளையும், கவ  
ரோட்டி போன்ற விவா  
பர தட்டிகளை செய்த  
மாணவிகளுக்கு பக்கள்  
சான்றிதழ்கள் போன்ற  
வைகளையும் ஓய்வுப்  
பெற்ற முன்னாள் இயற்  
பியல் துறைத் தலைவர்  
முனைவர் டி. நீலாசாந்த  
ருமாரி இணைப்பேராசி  
ரிகள் ஆக்ஸிலியம் கல்லூரி  
(தன்னாட்சி) அவர்களால்  
வழங்கப்பட்டது.

## 22<sup>nd</sup> October 2024 – “Guest Lecture on Perspective of Nanoscience”

The PG and Research Department of Physics, Auxilium College organized a Guest Lecture on “Perspectives of Nanoscience” on 22<sup>nd</sup> October, 2024. The event started with a prayer song. Dr.P.SeenuvasaKumaran, Principal, Govt. arts and science college, Tripattur District, Tripattur. He delivered a talk on Perspective of Nanoscience. He explained about the fundamental concepts in Nanoscience. He also explained about the application of nanomaterial in future advancements in various scientific disciplines. Finally, The chief guest answered for all the questions that was asked by the participants. All UG and PG students were enthusiastically participated in this event. The event was concluded with vote of thanks followed by college anthem.

				<b>AUXILIUM COLLEGE (Autonomous)</b> (Accredited by NAAC with A+ Grade in the 4 <sup>th</sup> Cycle) Gandhi Nagar, Vellore-632 006							
<b>PG &amp; Research Department of Physics</b> Organizes Guest Lecture on <b>Perspectives of Nanoscience</b>											
				<b>CHIEF GUEST</b> <b>Dr. P. Seenuvasa Kumaran</b> Principal, Government Arts and Science College Tirupattur District, Tirupattur							
Patron Dr. (Sr.) Mary Josephine Rani A. Secretary			Co-Patron Dr. (Sr.) Arokia Jayaceli A. Principal			Convener Dr. (Sr.) Amala Valarmathy A. Vice Principal			Head of the Dept. Dr. (Sr.) Venci X. COE		
22nd October 2024 @ 2.15 p.m.				<i>All are Cordially Invited</i>				Seminar Hall – Library Block			



## 29<sup>th</sup> November 2024 - Guest Lecture - "Nanophysics: The Physics of Tiny, Transforming our world"

PG & Research Department of Physics at Auxilium College (Autonomous), Vellore, organized an enlightening guest lecture titled "*Nanophysics: The Physics of Tiny, Transforming Our World*" on November 29, at Seminar Hall, Computer Block, with an audience comprising students and faculty members. The event began with invoking the presence of God through a prayer song. The lecture was delivered by **Dr. P. Seenuvasa Kumaran**, Principal of Government Arts and Science College, Tirupattur District. Dr. Kumaran, a distinguished scholar in physics, shared his expertise on the revolutionary field of nanophysics and its applications. He explained an overview of nanophysics, emphasizing its role in exploring and manipulating materials at the atomic and molecular scales. He highlighted how phenomena at the nanoscale differ significantly from those in the macroscopic world. The guest lecture provided an in-depth understanding of nanophysics and its transformative potential. He also gave a nice presentation about the applications of nanomaterials in solar cells, fuel cells, semiconductor devices and energy storage systems. He inspired students and researchers to explore the interdisciplinary applications of nanotechnology. The session concluded with an interactive Q&A segment, where participants discussed current trends and challenges in the field.



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Gandhi Nagar, Vellore-632 006



## PG & Research Department of Physics

Organizes Guest Lecture on

# Nanophysics: The Physics of Tiny, Transforming Our World



### CHIEF GUEST

**Dr. P. Seenuvasa Kumaran**

Principal, Government Arts and Science College  
Tirupattur District, Tirupattur

<b>Patron</b> Dr. (Sr.) Mary Josephine Rani A. Secretary	<b>Co-Patron</b> Dr. (Sr.) Arokia Jayaceli A. Principal	<b>Convener</b> Dr. (Sr.) Amala Valarmathy A. Vice Principal	<b>Head of the Dept.</b> Dr. (Sr.) Venci X. COE
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29<sup>th</sup> November 2024 @ 2.00 p.m.

Seminar Hall – Computer Block



## 19<sup>th</sup> December 2024 : Industrial Visit - U.R. RAO SATELLITE CENTRE (URSC)

### HERITAGE CENTRE & AEROSPACE MUSEUM, BANGALORE

On 19<sup>th</sup> December 2024, fifty-one students of the Department of Physics along with three staff members and Dr. (Sr.) Venci X. Head & Assistant Professor, Department of Physics, Auxilium College have visited the **U.R. RAO SATELLITE CENTRE (URSC) and HERITAGE CENTRE & AEROSPACE MUSEUM, BANGALORE**. The visit aimed to expose participants to the real-world applications of aerospace and satellite technology, fostering a deeper understanding of their operational processes and advancements. At first they have visited the Hindustan Aeronautics Limited (HAL) **HERITAGE CENTRE & AEROSPACE MUSEUM, BANGALORE**. Students were taken to visit the outdoor display of aircraft such as MARUT, MIG-21, HT-2, KIRAN, CANBERRA, AJEET, LAKSHYA, TEJA, DHRUV, etc. Here the students have learned about the materials used for making such aircraft, the manufacturing process and about the assembly facilities of aircraft. Then students were advised to visit the Rose Garden, Orchidarium and Herbal Garden with a number of exotic varieties. After lunch, the journey proceeded with a visit to U R Rao Satellite Centre, which is named after Dr. Udupi Ramachandra Rao, is ISRO's lead centre for satellite design, development, and testing. They have also learned the detailed information about the launch of forthcoming satellites like ANVESHA for DRDO, HRLV, a modified version of India's Launch Vehicle Mark III (LVM3) and Gaganyaan spacecraft. The URSC also exhibited the demo model of Chandrayaan-3 lander and rover which was launched into the space in the year 2023 and was seen by the students. The visit to HAL and URSC provided participants with invaluable insights into the aerospace and space sectors. It bridged the gap between the theoretical knowledge and practical applications, inspiring participants to explore careers in these fields. The experience underscores the importance of innovation, collaboration and precision in achieving the technological milestones.



## 29<sup>th</sup> January 2025 - Paper Presentation on “Advanced Materials and Technologies for Sustainable Development”

The PG and Research department of Physics organized the Paper Presentation competition for all students of Department of Physics on 29.01.2025 at the Computer Block Seminar Hall. This academic initiative aimed to encourage research, innovation, and knowledge sharing among students and faculty members. This session was shared by two judges Ms. Padmaja, Assistant Professor in Physical sciences, Auxilium College of Education, Vellore and Dr. Sangeethrani, Assistant Professor, Department of Chemistry, Auxilium College, Vellore. Fourteen UG students and seven PG students participated and presented their work and explained about bamboo bricks, nanomaterials for space, energy, medical applications, digital technology, thermoelectric materials, 3D printing, Carbon capture, utilization and storage, energy efficient building materials, meta materials, Biomaterials, polymers and Artificial intelligence etc.,. At the end of each presentation questions were asked by judges and audience. All students enthusiastically participated in this event and enriched their knowledge. This event provided a platform for students and researchers to present their findings, exchange ideas, and enhance their academic and professional growth. Prize winners were announced based on the content, presentation, explanation and their ability to answer. Finally, the program was ended with college anthem.



**AUXILIUM COLLEGE (Autonomous)**  
(Accredited by NAAC with A+ Grade in the 4<sup>th</sup> Cycle)  
Gandhi Nagar, Vellore-632 006



### PG and Research Department of Physics

Organizes



*Paper Presentation*



**Patron**  
Dr. (Sr.) Mary Josephine Rani A.  
Secretary

**Co-Patron**  
Dr. (Sr.) Arokia Jayaceli A.  
Principal

**Convener**  
Dr. (Sr.) Amala Valarmathy A.  
Vice Principal

**HoD**  
Dr. (Sr.) Venci X.  
Dept. of Physics

**Computer Block Seminar Hall**



## 6<sup>th</sup> February 2025 – “Physics Fest – Inter-collegiate Department Competition”

The PG and Research Department of Physics of Auxilium College, Vellore organized Physics Fest-2025 – Intercollegiate Department competition on 6<sup>th</sup> February 2025 at the Computer Block Seminar Hall. The fest provides a platform for the students to engage in scientific discussions, showcase their talents and explore the wonders of physics through various interactive competitions. The inaugural address for this event was delivered by Dr. Uvarajan, Head & Associate Professor, Department of Physics, Thiruvalluvar University, Serkadu, Vellore. He highlighted the role of physics in everyday life, from electronic devices to environmental sustainability. Dr. V. Sabari, assistant professor, PG and research Department of Physics, Marudhur Kesari Jain College, Vaniyambadi and Dr. K. Indhumathi, Assistant professor of physics, Muthurangam Government Arts college, Vellore served as a judge for the various competitions. The Physics Fest 2025 featured various competitions designed to challenge and engage students in different aspects of physics, including:

- **Quiz Competition** (teams of 3) - on physics-related themes.
- **Debate** - with topics provided on the spot.
- **Poster Presentation** (individual) on themes such as *The Science Behind Renewable Energy* and *The Physics of Climate Change*.
- **Physics Memes** (individual) where students created memes on the spot.
- **Model Making** (teams of 2) for presenting innovative working models.

Prize winners were announced based on the content, presentation, explanation and their ability to answer. Finally, the Valedictory session of the event was started at 4.00 pm. This session was presided by Dr. N. Jabena Begum, Assistant professor of Physics, D.K.M College for Women, Vellore. The valedictory address was given by Dr. N. Jabena Begum. More than 130 participants from various colleges in and around Vellore district enthusiastically participated in the event. The prizes and certificates were distributed to all the participants by Dr. N. Jabena Begum. The overall trophy was won by the Sacred Heart college, Tripattur. The event fostered creativity, teamwork, and scientific thinking, making it a memorable experience for all participants.

**MOTTO OF THE COLLEGE:  
KNOWLEDGE AND VIRTUE**

The main goal of the college is to produce in a Salesian atmosphere, integrally formed young women who will be agents of social transformation in today's India.

**About the College and the Department**

Auxilium College, founded in 1954, is the first women's college in the North Arcot district and now it is affiliated to the Thiruvalluvar University. Auxilium has been granted the status of autonomy by the UGC and the Thiruvalluvar University from the Academic year 2007-2008. It is a minority institution, established and administered by the daughters of Mary help of Christians commonly known as Salesian sisters of Don Bosco, belonging to the Catholic Church. The Physics department has been functioning since the beginning of the college and major Physics (UG) was started in 1999 and PG in 2014. Currently, it is upgraded for research.

**CHIEF PATRON**  
Dr. (Sr.) Mary Josephine Rani .A  
Secretary

**PATRON**  
Dr. (Sr.) Arokia Jayaceli. A  
Principal

**CO-PATRONS**  
Dr. (Sr.) Amala Valarmathy .A  
Vice Principal

**CONVENOR**  
Dr. (Sr.) Venci .X  
Head of the Department



**Auxilium College**  
(Autonomous)  
(Accredited by NAAC with A+ Grade in the 4th cycle)  
Gandhi Nagar, Vellore 632 006



**PHYSICS FEST  
2025**

**06 FEBRUARY 2025**

**Organized by**  
PG & Research Department of Physics  
Auxilium College (Autonomous)  
Vellore – 632 006

**Address for Correspondence**

Sr. Venci .X  
Convenor - Physics Fest 2025  
Head of the Department  
Auxilium College,  
Gandhi Nagar, Vellore - 632006  
9488706608  
physicsfest2024@gmail.com

## EVENTS

**Quiz**

- Maximum 3 participants are allowed per team.
- Event will be based on Physics theme.

**Debate**

- Each team would consist of 3 participants.
- There will be a screening round.
- Top 2 teams will be selected for the final round. Topics will be given on spot and 5 minutes will be given for presentation.

**Poster Presentation**

- Only individual participation is allowed.
- Students can showcase their ideas through poster.

**Topic for Poster Presentation**

- The science behind renewable energy
- The Physics of climate change

**Physics Memes**

- Only individual participation is allowed.
- Students have to prepare the memes on the spot and showcase their talent.

**Model Making**

- Maximum 2 participants are allowed per team.
- Students can showcase their ideas and working models.

**WHO SHALL PARTICIPATE?**

B.Sc Physics (1st, 2nd and 3rd year) students.

**REGISTRATION**

Each student should pay Rs. 100/- as the registration fee for each competition. Registration is mandatory for all students who would like to attend the programme. To register, follow the link: <https://forms.gle/oXyhxWzq8ef9ZQUc9>

**There is no limitations or restrictions for students to participate in events**

**Last date for online Registration: 03.02.2025**

**Spot Registration is also allowed**

**Kindly send Your name list to the given mail**

Account Name : All Departments  
Account number: 168301000020931  
IFSC Code: IOBA0001683  
Bank Name: Indian Overseas Bank  
Branch Name: Auxilium College

**EVENT COORDINATORS**

Dr.Devi .N.R  
Dr. Sarjila .R  
Dr. Priyadarshini .A  
Dr. Lakshmi .N .V  
Dr. Deepapriya .S  
Dr. Saranya .P.E  
Ms. Kavitha .N



## 08<sup>th</sup> March 2025 - "Yoga as a Tool for Women's Empowerment and Personal Growth – A Hands-on Demonstration"

The PG & Research Department of Physics, Auxilium College (Autonomous), Vellore, celebrated International Women's Day on 8<sup>th</sup> of March, 2025, at 12:30 p.m. The event took place in the Indoor Stadium of Auxilium College and was organized to promote women's empowerment and personal growth through the practice of yoga. The event started with a prayer song. The program featured a hands-on demonstration titled "Yoga as a Tool for Women's Empowerment and Personal Growth." The guest speaker for the event was Ms. Shiny Angel Pascal, M.Sc., B.Ed., an alumna of the (2017–2022 batch) Department of Physics and currently working as a teacher at Cluny Matric Higher Secondary School, Venkatesapuram, Katpadi. The session began with an introduction to yoga, explaining its benefits for physical and mental well-being. Ms. Shiny Angel Pascal presented the theory part of different types of Aasanas, Muthras and Surya Namaskaram through power point presentation. She also explained about the benefits of doing that Aasanas. She gave the demo part of various Aasanas, Muthras and Surya Namaskaram. Her insightful and interactive session highlighted the importance of yoga in enhancing physical well-being, mental clarity, and emotional strength, especially for women. All the students enthusiastically participated in this session and practiced the Aasanas actively. They learned about different types of stress relief Aasanas and enjoyed well. Breathing exercises (Pranayama) were practiced, followed by a short meditation session for mental calmness. It will be very useful session for the students to come out of stress and also for their healthy life. The celebration successfully created awareness about the role of yoga in personal and professional development and encouraged women to embrace self-care and holistic growth.



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### International Women's Day

PG & Research Department of Physics  
*Organizes*  
**Yoga as a tool for Women's Empowerment and Personal Growth :  
A Hands-on Demonstration**

GUEST SPEAKER  
**Shiny Angel Pascal** M.Sc., B.Ed.  
Alumnae (2017- 2022 batch)  
Teacher, Cluny Matric Hr. Sec. School, Venkatesapuram, Katpadi



**Patron**  
Dr. (Sr.) Mary Josephine Rani A.  
Secretary

**Co-Patron**  
Dr. (Sr.) Arokia Jayaceli A.  
Principal

**Convener**  
Dr. (Sr.) Amala Valarmathy A.  
Vice Principal

**Head of the Dept.**  
Dr. (Sr.) Venci X.  
Controller of Examinations

8<sup>th</sup> March, 2025 @ 12.30 p.m.

*All are Cordially Invited*

Indoor Stadium – Auxilium College





## **March 24 - 28, 2025 - Faculty Development Program (FDP) on "Advancing Scientific Knowledge"**

The Five-Day National Level Online Faculty Development Program (FDP) on "Advancing Scientific Knowledge" was organized jointly by the Department of Physics, Sacred Heart College (Autonomous), Tirupattur, and Auxilium College (Autonomous), Vellore from March 24 - 28, 2025 through google meet. The objective of the FDP was to equip faculty members, research scholars, and postgraduate students with cutting-edge knowledge in various scientific domains and to encourage interdisciplinary research and innovative teaching methodologies. The first day of Inaugural session of the FDP was presided by Dr. Theophil Anand, Vice Principal, Sacred Heart College, Trippattur. Mr. Daniel Lawrence, Head & Assistant Professor, Department of Physics welcomed the gathering. Dr. S. Yugeswaran, Assistant Professor, Department of Physics, Pondicherry University, Pondicherry was invited as a chief guest on Day 1, 24.3.25. He delivered a talk on "Plasma for Sustainable Energy". On Day 2, Dr. M. Senthilkumar, Associate Professor, Department of Applied Physics, Joy University, Tirunelveli, enriched us with his unique presentation on "Advances in carbon-based nano materials and their bio medical applications". He explained about Graphene oxide synthesis method and their applications for cancer treatment. Dr. Rajalakshmi Murugesan, Assistant Professor, Department of Mechatronics Engineering, Thiagarajar College of Engineering, Madurai presented about her talk on "Smart Drones & AI: The Future of Automation" on Day 3. She explained about intersecction of AI/ML and integrating robotic arms with bio drone technology. The Chief guest of the Day 4, Dr. R. Shankar, Assistant Professor, Department of Physics, Bharathiyar University, Coimbatore delivered a speech on "Quantum chemical analysis of low-dimnstonal materials for Hydrogen storage and explained about hydrogen storage and production for renewable energy applications. On Day 5, Dr. S. Thiyagaraj, Associate Professor,

PG Program Head, Department of Physics and Electronics, Jain university, Bangalore has discussed about crystal engineering for next-generation supercapacitors. The FDP was conducted online via Google Meet, ensuring accessibility to participants across various institutions. The program was open to faculty members, research scholars, and postgraduate students with an interest in research. Overall ninety participants registered and actively engaged in the sessions. E-Certificates were issued to participants who attended all five sessions of the FDP. The FDP on "Advancing Scientific Knowledge" successfully provided a platform for participants to enhance their knowledge in emerging scientific areas.

### Eminent Speakers

**DAY-4: 27TH MARCH 2025 @6.30 PM**  
**TOPIC: QUANTUM CHEMICAL ANALYSIS OF LOW-DIMENSIONAL MATERIALS FOR HYDROGEN STORAGE**

**Dr. R. Shankar,**  
**Assistant Professor,**  
**Department of Physics,**  
**Bharathiar University,**  
**Coimbatore, Tamil Nadu, India.**

**DAY-5: 28TH MARCH 2025 @6.00 PM**  
**TOPIC: CRYSTAL ENGINEERING FOR NEXT-GEN SUPERCAPACITORS**

**Dr. S. Thijagaraj,**  
**Associate Professor & PG Program Head,**  
**Department of Physics and Electronics,**  
**Jain (Deemed-to-be University),**  
**Bengaluru, Karnataka, India.**

### ORGANIZING COMMITTEE MEMBERS

MR. C. TRIPATHY  
 DR. M. AGAVINATHARAJ  
 DR. R. RAMESH  
 MR. D. RAJARAM  
 MR. N. MADHAVAN  
 DR. M. JOSE  
 DR. S. A. MARTIN BRITTO DHAS  
 DR. G. SIVAKUMAR  
 REV. DR. G. THEOPHIL ANAND  
 DR. L. ANANDARAJ

DR. S. JOHN SUNDARAM  
 REV. DR. P. GANDHI KALLARASAN  
 DR. P. KANNAPPAN  
 REV. DR. S. BHAGATHI BERNADSHA  
 DR. D. SIVA PRIYA  
 DR. R. SARJILA  
 DR. J. PRIYADHARSHINI  
 DR. N. V. LAKSHMI  
 DR. S. DESAI PRIYA  
 DR. P. SARANYA

**IMPORTANT DATES:**  
 Registration Deadline : 22.03.2025  
 Confirmation of Participation : 23.03.2025

**WHO CAN ATTEND:** Faculty Members / Research Scholars / PG students with a keen interest in Research.

**REGISTRATION FEE:** Rs.100/-

**PLATFORM:** GOOGLE MEET

**CERTIFICATE OF PARTICIPATION:** E-Certificates will be issued to participants who attend all five sessions.

**REGISTRATION:** Registration is compulsory and must be completed via the provided link.  
 Registration Link: <https://forms.gle/hTqrHUUK5W5aCUi67>

**Address for Correspondence:**  
**Mr. D. Daniel Lawrence,**  
**Head, Department of Physics**  
**Sacred Heart College (Autonomous)**  
**Tirupattur - 635601, Tamil Nadu, India.**  
**Email: [shphysics1968@gmail.com](mailto:shphysics1968@gmail.com)**  
**WhatsApp: 9443963717**  
**Contact Numbers: 7010314271 & 9885263035.**

**Online Faculty Development Program**

**FIVE-DAY NATIONAL LEVEL ONLINE FACULTY DEVELOPMENT PROGRAM (FDP) ON**

**"ADVANCING SCIENTIFIC KNOWLEDGE"**

**MARCH 24 - 28, 2025**

**Conveners**  
**Mr. D. Daniel Lawrence & Dr. (Sr.) X. Venci**

**JOINTLY ORGANIZED BY**

Department of Physics  
**Sacred Heart College (Autonomous), Tirupattur, TN. & Auxilium College (Autonomous), Vellore, TN.**

### About the Institutions

**SACRED HEART COLLEGE**  
 Sacred Heart College, Tirupattur, founded in 1883 by Rev. Fr. Joseph Carrone SDB, is a distinguished institution affiliated with The Visvesvaraya University and administered by the Sisters of Don Bosco. With a rich legacy of academic excellence and holistic education, the college offers a wide array of undergraduate, postgraduate, and research programs across arts, commerce, and science disciplines. Demonstrating its commitment to academic growth and innovation, the college attained autonomous status for its BBA (Bachelor of Business Administration) and B.Ed. (Bachelor of Education) programs in 2021-22, followed by complete autonomy for all undergraduate courses in 2025-26. Over the years, Sacred Heart College has consistently excelled in higher education, earning a prestigious A++ Grade with a CGPA of 3.82/4 in its 5th cycle of NAAC accreditation. It also secured a 4th rank in India under the NIRF 2024 rankings. Further solidifying its reputation for quality education, Sacred Heart College focuses on the holistic learning environment that upholds Christian values, with a preferential focus on the underprivileged, while empowering students of all faiths. Committed to empowering young minds, Sacred Heart College continues to shape future leaders through academic rigor, research, and a strong sense of social responsibility.

**AUXILIUM COLLEGE**  
 Auxilium College for Women, Vellore, was founded in 1884 by the Salesian Sisters of Don Bosco. Affiliated with The Visvesvaraya University, it offers undergraduate, postgraduate, and research programs in arts, commerce, and science. The college achieved autonomous status in 2007-08, and has been consistently recognized for its academic excellence, earning an A+ Grade in its 3rd cycle of NAAC accreditation with a CGPA of 3.82/4, in ranks within the top 200-300 in India according to NIRF 2024. Emphasizing Christian values and inclusivity, the college focuses on providing education to the underprivileged while nurturing students of all faiths. Auxilium College is dedicated to empowering women through rigorous academics, research, and a strong sense of social responsibility.

**ABOUT THE DEPARTMENTS**  
 The Department of Physics at Sacred Heart College (established in 1986) and Auxilium College for Women (established in 1988) have a shared commitment to academic excellence and research. Sacred Heart College offers a comprehensive range of programs from undergraduate to PhD, emphasizing foundational principles and practical applications of physics. Auxilium College focuses on empowering women through quality education and co-curricular engagement. Both departments are well-equipped with laboratories and resources to foster research and skill development. This collaborative program is one of the initiatives under the signed MoU between the two departments, highlighting their dedication to academic excellence and mutual growth.

**ABOUT THE FDP**  
 The online National Level Faculty Development Program (FDP) on "Advancing Scientific Knowledge" is designed to empower educators with the latest advancements and methodologies in scientific research and teaching. Organized by leading institutions, this FDP aims to enhance participants' understanding of cutting-edge scientific concepts, foster innovative teaching practices, and promote interdisciplinary research. The program features expert lectures and interactive sessions, offering a comprehensive platform for faculty members to upgrade their skills and contribute to the advancement of science education.

### ADVISORY COMMITTEE

DR. RAJIVEL BRINHANMURTHY, KANSA STATE UNIVERSITY, UNITED STATES.  
 DR. KIBALAN SRINIVASAN RAJATHI, DONGGUK UNIVERSITY, REPUBLIC OF KOREA.  
 DR. PREMKANAR SELVAN, SOUTHEAST UNIVERSITY, CHINA.  
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 DR. K. RAMESH, VIT, VELLORE.  
 DR. L. KUNJANADEVI, MOTHER TERESA WOMEN'S UNIVERSITY, KODAIKANAL.  
 DR. UVARAJAN, THIRUVALLUVAR UNIVERSITY, VELLORE.  
 DR. R. E. DUNEY, BRUNNENBERG COLLEGE OF ENGINEERING & TECHNOLOGY, JESSICA PRASAD.  
 DR. SARAVANAN, SVANANDRA COLLEGE OF ENGINEERING & TECHNOLOGY, ANANDRAJAPURAM.  
 DR. JOYLINE G. DSA, SAHYADRI COLLEGE OF ENGINEERING & MANAGEMENT, MANGALORE.  
 DR. P. SINDHU JOSEPH, ST. THOMAS COLLEGE, KOTTAYAM, KERALA.  
 DR. M. VICTOR ANTONY, SAAI LOGICAL COLLEGE, CHENNAI.  
 DR. M. BALAKRISHNAN, GOVERNMENT ARTS COLLEGE, THIRUVANANTHAPURAM.  
 DR. M. SARAVANA KUMAR, MUTHURANGANAM GOVERNMENT ARTS COLLEGE, VELLORE.  
 DR. R. ROBERT, GOVERNMENT ARTS COLLEGE, KESIRIPADI.  
 DR. G. SARDHANA, GOVERNMENT ARTS COLLEGE, COMBATORE.  
 DR. R. SURESH BABU, MUTHURANGANAM GOVERNMENT ARTS COLLEGE, VELLORE.  
 DR. P. HEMALATHA, GOVERNMENT ARTS COLLEGE, COMBATORE.  
 DR. G. SHRIKANTH, ISLAMIAH COLLEGE, VANIYANBAZAL.  
 DR. D. JAYARAMAN, VIGNANESHWAR COLLEGE, VELLORE.  
 DR. K. MELBA, ST. XAVIER'S COLLEGE, PALAYANDITTAI.  
 DR. C. VINODHINI, G.M. COLLEGE FOR WOMEN, VELLORE.  
 DR. A. AMEEN BASHA, ST. JOSEPH'S COLLEGE FOR WOMEN, SALEM.  
 DR. N. JAYASINHA REDDY, G.M. COLLEGE FOR WOMEN, VELLORE.  
 DR. R. ANURAG KUMAR, DR. VISHVA SANKAR JYU & SCIENCE COLLEGE, THANDAKKURAM.  
 DR. J. ARJUNAN, VELAMMAL ENGINEERING COLLEGE, CHENNAI.

### Eminent Speakers

**DAY-1: 24TH MARCH 2025 @6.00 PM**  
**TOPIC: PLASMA FOR SUSTAINABLE ENERGY**

**Dr. S. Yugeswaran,**  
**Assistant Professor,**  
**Department of Physics,**  
**Pondicherry University,**  
**Puducherry, India.**

**DAY-2: 25TH MARCH 2025 @6.00 PM**  
**TOPIC: ADVANCES IN CARBON-BASED NANO-BIO-MATERIALS FOR MEDICAL APPLICATIONS**


**Dr. M. Senthikumar,**  
**Associate Professor,**  
**Department of Applied Physics,**  
**Joy University, Tirunelveli,**  
**Tamil Nadu, India.**

**DAY-3: 26TH MARCH 2025 @6.00 PM**  
**TOPIC: SMART DRONES & AI: THE FUTURE OF AUTOMATION**

**Dr. C. Karthik,**  
**Associate Professor & HoD,**  
**Department of Mechatronics Engineering,**  
**Jyothi Engineering College,**  
**Thrissur, Kerala, India.**

Crystal Engineering for NEXT-GEN Supercapacitor.....

Compare with



Capacitance (F or G)

Capacity (mAh)

Low-energy Density

Low-energy Density & High Powder Density

Devi N.R.

Deepa A

Dr. H. Joy Prabu

Venka

Dr. A. Dhayal

Assistant Pro...

Thiyagaraj Se...

siva priya


25 others

0:46

qaf-qwca-qnm

efficient DRGH gases

Multi-electrode plasma torch for gas dry reforming



DR.YUGESWARAN is presenting

Assista...

DR.YU...

Sa 72 others