



A.P.C. MAHALAXMI COLLEGE FOR WOMEN, THOOTHUKUDI

DEPARTMENT OF PHYSICS (U.A)

Consolidated Report (2024-2025)

A special lecture was conducted by the Department of Physics in association with Institution's Innovation Cell (IIC) on the topic, "Entrepreneurs on Physicists "on 30.08.2024. Sixty-Seven students took part in the program enthusiastically. Dr. V. Jeyanthi Kumari, Assistant Professor of Zoology, A.P.C. Mahalaxmi College for Women, Thoothukudi acted as resource person and shared her views about various avenues for starting their own ventures. She also motivated students to embrace an entrepreneurial mindset, encouraging them to take calculated risks and pursue their ideas with determination. She also highlighted the need for persistence in the face of obstacles, with resilience being key to long-term success in both scientific and entrepreneurial endeavors



An Annual Alumnae Meet was conducted on 15.08.2024 by the department. Our Prominent alumna, Ms. R. P. Sathya Jai Shree, Technical Consultant of the Minemann Systems addressed the gathering. She gave an inspiring talk on the topic "Physics as a Pathway to innovations". She also discussed about impactful innovations, role of physics, and scope of physics in various sectors.



A Gender Sensitization program was organized by the department on the topic “Empowerment and Protection Navigating the PoSH act” on 25.09.2024. Adv. Mrs. Raja Mahizhndha , Retainer Advocate of Shriram Finance Limited, Thoothukudi acted as the resource person. 52 participants were benefitted by the program. The topics POSH Act and its importance, Elements of POSH, Types of harassments, Responsibilities of an individual and Internal Complaint Committee’s importance were discussed by the speaker in the session.



National Energy Conservation Day was celebrated with a special lecture on the topic, “Powering the Future: The Importance of Energy Conservation”, the talk was given by Dr. N. Booma Devi, Assistant Professor of Physics, Sri Saradha College for Women, Tirunelveli on 12.12.2024. 60 Students were benefitted by the program. She addressed key topics including,

the importance of conserving energy to combat climate change and the role of renewable energy in reducing dependency on non-renewable resources



An Interdepartmental Workshop on Android mobile phone Troubleshooting and Servicing was organized by the department in association with New Technology Institutions, Coimbatore on 06.01.2025 & 07.01.2025. Mr. B. Krishnakumar, Founder/CEO of the institution and his team have trained 104 students from various departments. The workshop covered a range of essential topics, including an introduction to Android operating systems and hardware architecture, identification and resolution of common hardware issues such as battery and screen malfunctions, and software troubleshooting techniques like addressing app crashes, system updates, and malware removal. Activities included expert-led lectures, live demonstrations of troubleshooting techniques, hands-on training sessions with real devices under supervision, and interactive Q&A discussions. The sessions allowed participants to gain practical experience and solutions tailored to real-world scenarios.





An Industrial visit was arranged for the students to visit ISRO Propulsion Complex, Mahendragiri on 20.01.2025. During our visit to IPRC Mahendragiri, we had the opportunity to meet Distinguished Scientist and Director of the ISRO Propulsion Complex (IPRC), Mahendragiri, Tamil Nadu Shri. J. Asir Packiaraj. His speech inspired students by highlighting ISRO's achievements, future missions, and the importance of innovation in aerospace engineering and the role of women in ISRO. The industrial visit was arranged to understand the working of liquid and cryogenic propulsion systems, gain knowledge of the latest advancements in space technology, and witness the rigorous testing processes that ensure the reliability of ISRO's launch vehicles. It was highly beneficial in bridging the gap between theoretical knowledge and practical applications in the aerospace industry. The visit inspired the students to explore careers in space research and technology development.





A Career Counselling Program was conducted by the Department of Physics on the topic “Pathways to Success: Navigating Careers in Industry” on 13.02.2025. Mr. J. Chittananda, M.Sc., B.Ed .,Physics Teacher (Retd), St. Thomas Matriculation School, Thoothukudi acted as resource person. The session focused on emerging industry trends, skill development, and strategies for career advancement. The program also emphasized the importance of health and mental well-being, providing guidance on managing stress, work-life balance, and maintaining overall wellness to ensure long-term career success. The outcome of the program was significant, with increased awareness about career opportunities across multiple sectors. Participants gained clarity on skill-building and professional development. Future editions will continue to provide enhanced career guidance, industry insights, and a greater focus on health and mental well-being. At the end of the session, students shared their feedbacks and clarified their doubts with the resource person. 81 participants were benefitted by this program.



In commemoration of National Battery Day, Department of Physics organized the Interdepartmental Poster Making Competition on the topic “Green Energy and Batteries: Powering the Renewable Revolution” on 21.02.2025. The objective of the program is to inspire young minds to think about the future of energy and innovation related to energy storage and sustainability and to promote the importance of battery recycling and environmentally friendly disposal methods and encourage sustainable practices regarding battery usage. Dr. D. Shanmuga Priya, Assistant Professor of Chemistry, A.P.C Mahalaxmi College for Women, Thoothukudi was invited as the Judge of the competition. 33 students from various departments were actively participated in this competition. They exhibit their skills in effective manner. They explained the concept of their posters to the judge. The participants got more aware of the environmental challenges related to battery disposal, recycling and the importance of using ecofriendly alternatives particularly in battery technology. The judge evaluated the posters and finally the winners were announced. K. Abitha of I. M. Sc Chemistry won the first prize, R. Pavithra of III B. Sc Physics gained second prize and A. Mirudhula Christee of III B. Com II Batch got third prize. The prizes were distributed to the winners.



The Department of Physics organized a special talk on “Artificial Intelligence: Shaping the Future of Scientific Research” on the occasion of National Science Day on February 28, 2025. The session was graced by the presence of Mr. J. Allwyn Jeyadurai, M.Sc., M.Ed., SET, Assistant Professor of Chemistry, Nazareth Margoschis College, Pillaiyanmanai, Nazareth, who served as the guest speaker. Mr. Allwyn Jeyadurai delivered

an insightful lecture on the impact of AI in various research domains, emphasizing its applications in data analysis, automation, and problem-solving in physics and chemistry. He also discussed the ethical implications and future scope of AI-driven scientific discoveries. The talk was followed by an engaging question-and-answer session, where students and faculty actively participated, seeking clarifications and sharing their perspectives. The event was a great success, inspiring students to explore AI's potential in scientific research and enhanced understanding of how AI is revolutionizing scientific discovery and addressing ethical considerations while opening new career and research opportunities. 104 participants were benefitted by this session.



The Interdepartmental Arts and Science Exhibition, FUSIONFEST-2025, was Organized by the department on March 12, 2025. The exhibition served as a dynamic platform for students to showcase their creativity, innovation, and interdisciplinary knowledge. The theme for the Arts category was “Scientific Exploration Behind Indian Ancient Architecture in Temples and Monuments” highlighting the scientific principles and architectural brilliance of ancient Indian structures. The theme for the Science category was “The Wonders of Science: How Interdisciplinary Innovations Shape Our World” emphasized the impact of scientific advancements across various fields. A total of 46 students actively participated in the exhibition. The event was judged by Dr. P. Yokeswari Nithya, Assistant Professor of Chemistry and Dr. M. Muthulakshmi, Assistant Professor of Commerce of A.P.C. Mahalaxmi College for Women, Thoothukudi. Their expertise helped in evaluating the exhibits based on creativity, scientific accuracy, and presentation skills. The exhibition provided an

excellent platform for students to explore the intersection of science, history, and the Indian Knowledge System (IKS) through creative exhibits.



One day State Level Seminar on Recent Trends in Physical Sciences (RTPS'25) on 27th March 2025 was organized by the department. The primary objective of this seminar was to bring together experts, researchers, and students to explore and discuss recent developments in physical sciences. The event aimed to enhance knowledge sharing, encourage interdisciplinary collaboration, and provide a platform for young researchers to gain insights from experienced professionals.



The technical session I was delivered by Dr. S. Stephen Rajkumar Inbanathan, Associate Professor, Postgraduate & Research Department of Physics, The American College, Madurai. He presented an engaging talk on “Neutrinos: The Exclusive Ghost Particles of the Universe”. His session provided deep insights into neutrinos, their properties, and their role in astrophysical phenomena. The session covered groundbreaking research in neutrino physics, highlighting recent discoveries and experimental advancements.



The Technical Session II was conducted by Dr. S. R. Balaji, Assistant Professor of Physics, Kamaraj College (Autonomous), Thoothukudi. His topic, “Breakthrough Methods for Decoding the Secrets of Single Crystals and Nanomaterials”, provided valuable insights into the latest developments in crystallography and nanotechnology, sparking significant interest among the attendees. Dr. Balaji explained the fundamental principles behind single crystal growth and characterization techniques, emphasizing their importance in various technological applications. A dedicated feedback session was conducted, where participants shared their experiences and expressed their appreciation for the knowledge gained through the seminar. 105 Participants were benefitted by this seminar. Certificates were distributed to all the participants.



B. Balaji

Head of the Department

K. Sridharan

Principal