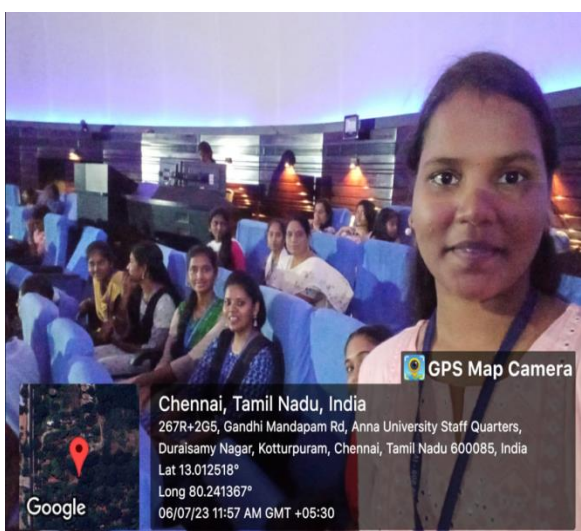
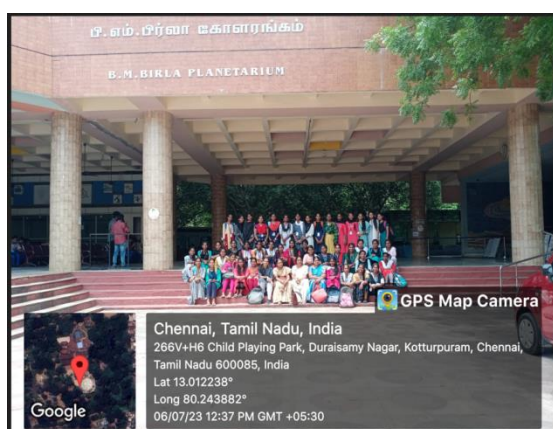


Queen Mary's College (Autonomous), Chennai-4

PG and Research Department of Physics

ASSOCIATION ACTIVITIES 2023- 2024

As a part of extended education, to trigger the thought process, observation skills and make the students realize the spirit of teamwork, III B.Sc Physics students were taken on a field trip for a Plasma exhibition program on 6.7.23 jointly organized by Institute of Plasma research, Gujarat, Tamil Nadu Science and Technology Centre, Chennai & Indira Gandhi Centre for atomic research, Kalpakkam at Periyar Science and Technology Centre campus, Kotturpuram. Students were accompanied by Dr. S.Sarojini, Dr. Vanathi Vijayalakshmi and Dr. M. Loganayaki.



Students came to know about Plasma and its principles, Plasma creation, rocket propulsion method, tesla coil, eddy currents, magnetic levitation and some ways of producing and storing of electricity. They visited numerous halls with different scientific exhibits on display, fun mirrors, mathematical demos and astronomical phenomena, galleries dedicated to Defence research and nuclear energy at Birla Planetarium and Science Centre. They watched three shows. First of all, High resolution video was projected on a suspended globe, representing our earth described Earth's atmosphere, oceans and land with the help of digital images. Second 3D show was in most modern BM Birla planetarium. In this sky theatre with 360 degree effect, students were provided a virtual tour in night sky and holding cosmic shows on a specially perforated hemispherical inner dome. Third 3D show was about dinosaur era that was entirely fun-filled show. They visited the

outdoor exhibitions categorized into different branches of science. Students had a wonderful time thoroughly enjoyed with all the displays that paved way for enriching their knowledge and learnt about cosmic world.

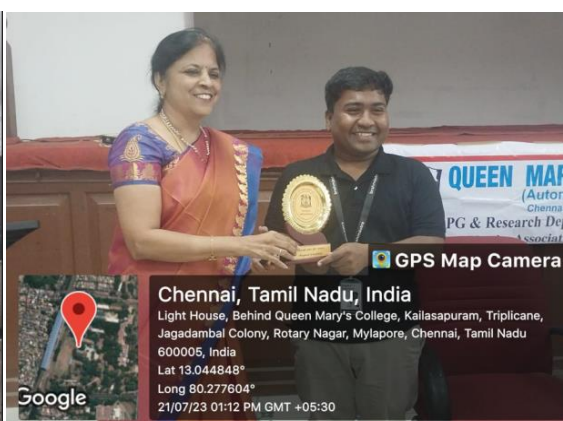
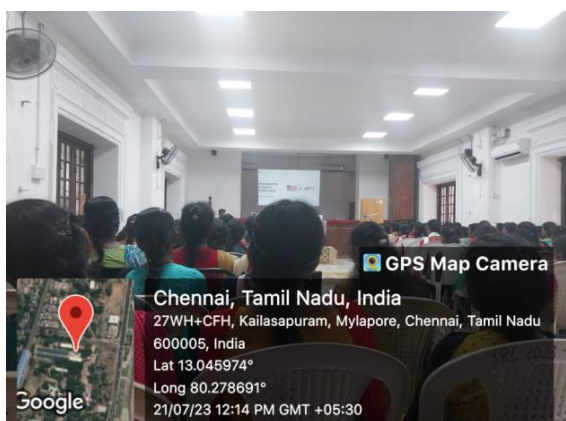
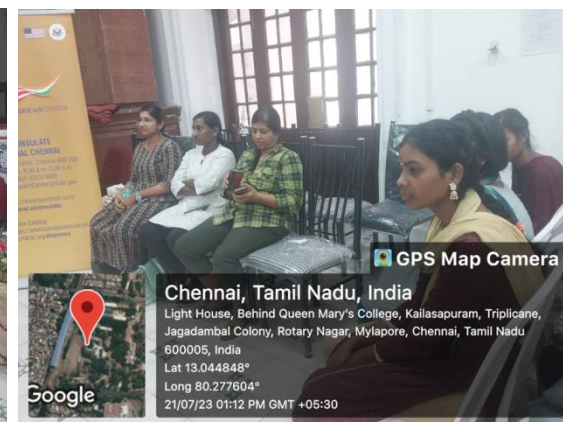
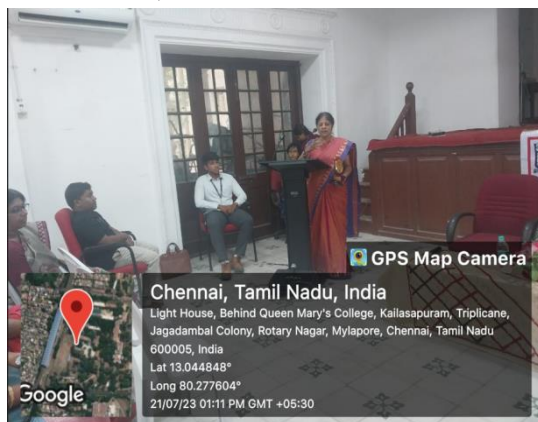
All the II M.Sc students visited IITM Research Park at Perungudi on 20.7.23 and interacted with prof Ashok jhunjunwala. Students were accompanied by Dr. Hemamalini Rajagopal, Head of the Department, Dr. J. Srividya and Dr. G.Usha.



Students wondered on seeing motorized wheel chair made by their own students using sensors specially made for physically challenged people, in particular people working in food deliveries often make use of this. That is available in markets nowadays. Corporates have good collaboration with these IITM research park to bring to their new innovations in various fields to

help the society. They got an opportunity to visit their Health care and Diagnostic Centre that equipped with advanced techniques. They visited the incubation Centre where they can get funds, knowledge sharing and facilities available for research work, their work for finding the technique to prevent electronic vehicles catching fire is on progress. Students interacted well with the staff and learnt many new things.

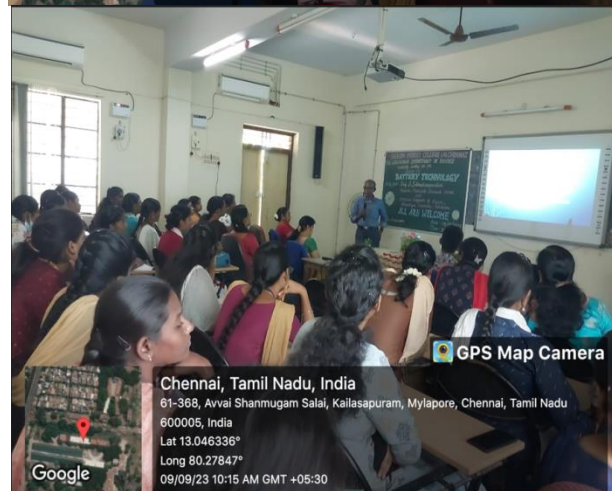
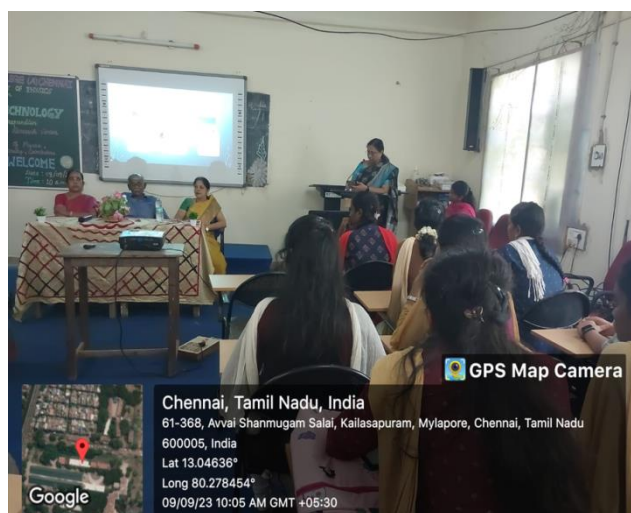
On behalf of Physics Association, a lecture on Space Exploration Program by Brahmastra team was conducted at Assembly Hall on 21.07.23 at 11.45 am. The program commenced with the welcome speech by our Head of the department Dr. Hemamalini Rajagopal. The Resource person was Dr. Subash, US Consulate in Chennai.



Dr. Subash explained in detail about how India started to launch satellites and returning humans to the Moon through NASA's Artemis program. Researcher Aruna Devi shared the chronology of space Exploration. She explained about the space craft from Sputnik to Chandrayan 3 and its mechanism till now that was too fascinating. She gave an exclusive facts about Apollo mission and lunar exploration missions under Chandrayaan program expanding our understanding of the cosmos. And she delivered the interesting facts about telescope. She pointed out that women's participation in space science such as Tessy Thomas. Her lecture enlightened our minds towards space science. Dr. Subash gave more information about the opportunities in this particular field and he shared some interesting facts about lander and rover. His speech inspired our students and it was an effective and interesting lecture to enhance our understanding of the universe. And at the end of the session, the quiz was conducted that kindles the student's spirit of exploration.

PG and Research Department of Physics conducted a special lecture by Prof. S. Selvasekara Pandian, Director-Material Research Center and Emeritus professor of physics, Bharathiar University, Coimbatore on "Battery Technology" on 09.09.23 at 10 am. The program commenced with the welcome address by Dr. V. Nirmala, Associate Professor of Physics

department. Faculty of Physics department, research scholars, II M.Sc students of Physics and Chemistry department attended the lecture. Being an enthusiastic and passionate researcher, the Chief Guest inspired and kindled the interests of students. He explained the history of batteries, its parts, mechanism, preparation of polymer electrolytes with different salt concentrations, requirements to get high ionic conductivity, confirmation of prepared samples by XRD, glass transition temperature from DSC and conductivity–temperature plots. He assured that he would help our faculty and students in preparing polymer electrolytes and thereby forming batteries from it. The lecture was very informative and enlightening as it gave an innovative exposure to students with keen interest to do projects in constructing batteries. At the end of the session, all faculty and students interacted with chief guest and got their doubts clarified.



COMPETITIONS

1. The physics association conducted an essay competition for entire college on the topic "My Wings of Fire, அப்துல் கலாமிலிருந்து எனக்குள் முளைத்த அக்னிச் சிறகுகள்" on 27.7.23 at 9am on the commemoration of death anniversary of Bharat Ratna, Dr. A. P. J. Abdul kalam, former President of India.

ThePrize-winners are:

Tamil Category:

First Prize: Ms.S.Trisha, I BA Sociology, Queen Mary's College

Second Prize: Ms.M.Sowmiya, III B. Sc Chemistry, Queen Mary's College

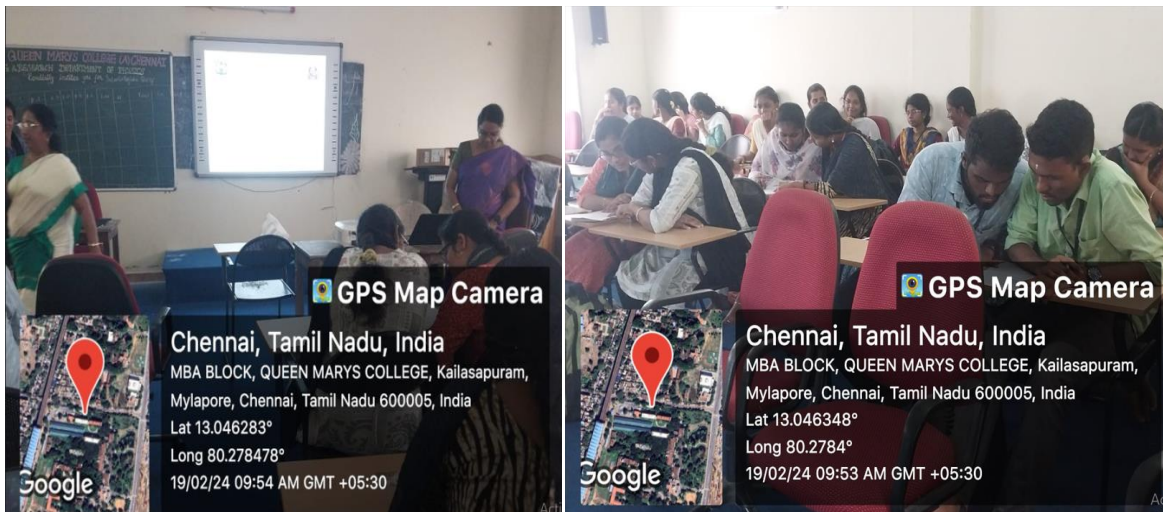
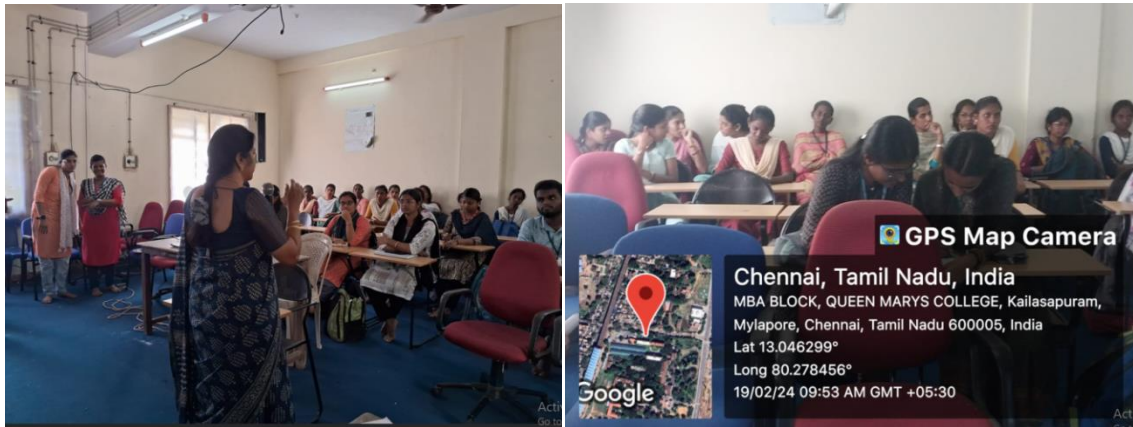
English Category:

First Prize: Ms.Alina Das, I BA English Literature, Queen Mary's College

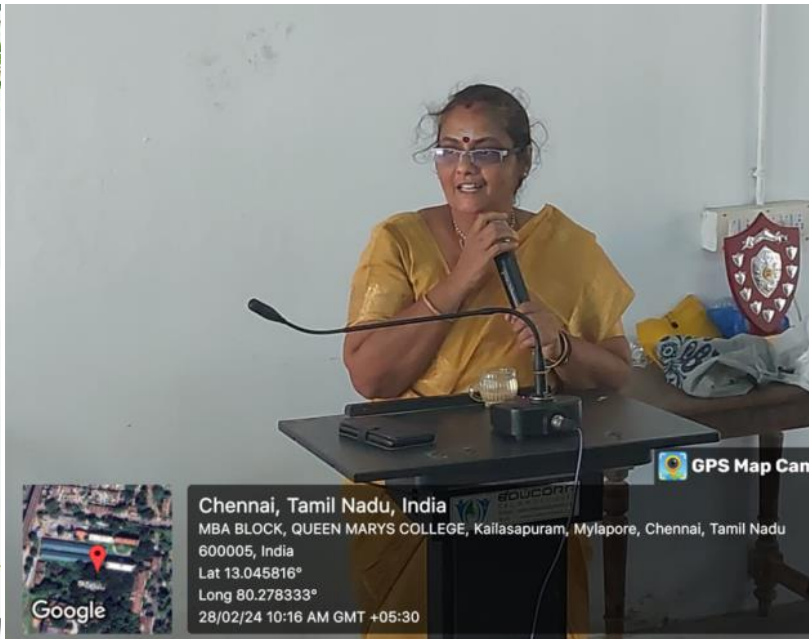
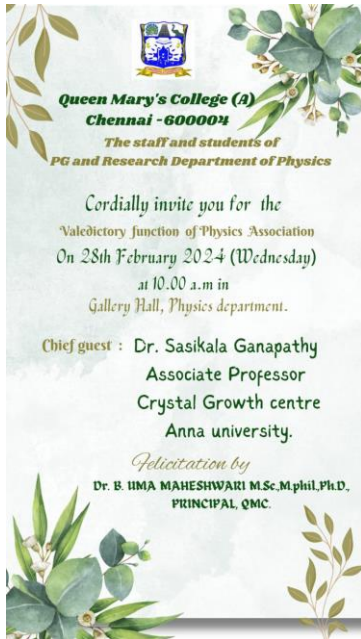
Second Prize: Ms.Jayasri, I B. Sc Home Science, Queen Mary's College

2. Physics Association, PG and Research Department of Physics conducted intercollegiate Physics Quiz-2024 for Madame Marie Curie Rolling Shield on February 19, 2024. Students from following colleges participated. 1. Bharathi Women's College 2. Chevalier T. Thomas Elizabeth College for Women Arts and Science College 3. Queen Mary's College 4. Madras Christian College 5. Presidency College 6. Stella Maris College. From preliminary round, 5 teams out of 6 were shortlisted for final round. Five rounds such as Guess the Scientist, Guess the Law and the rapid fire round etc were conducted. The following are the winners.

- I prize - MCC, (1.Mr.R.Balaji Sudharsa 2.Mr.G.E.Evans Devakrubakar)
- II Prize - Presidency College, - (1.Mr. M.Dinesh 2.Mr.M.Mohamed Umar)
- III Prize - Stella Maris College. (1.Ms.C.T.Subbulakshmi 2.Ms.T.Blessy Arockiya)



The valedictory function of the Physics Association was conducted on 28th February 2024. It was commenced with the welcome speech by the Head of the department Dr. Hemamalini Rajagopal. All the Faculty and students of our department attended this event. Dr. Sasikala Ganapathy, Associate Professor, Crystal Growth Centre, Anna University was our chief guest. She is an Alumni of our college (B.Sc -1985-1988). She highlighted the significance of interdisciplinary studies and motivated students to think beyond boundaries. Madame Curie Rolling Trophy was handed over to students of Madras Christian College, Chennai for having won first place in intercollegiate quiz competition. Prizes were distributed to the winners of the quiz competition and essay competition.



Prizes Won:

1. S. Gomathi, M. Ramyadevi, V. Sanjana, G.Eswari, R. Kanmani and A. Nusrathtaj of II B.Sc Physics won the 2nd prize in the Inter-department Kabaddi tournament organized by Department of Physical Education in connection with National Sports day on 31.08.23.



2. Velpuri Amulya of II B. Sc. (E/M) secured the second place in competition held by French Department of Stell Maris College on 15th September 2023.



