

ACTIVITIES - 2021 – 2022

1. ONLINE POSTER MAKING COMPETITION

Astronomy Club of Ethiraj College organized an Online Poster Making Competition for the school students of grade 5 to 12 on 10th October 2021. The event was organized for two different categories (classes 5-8 and classes 9-12). The participants were allowed to make hand-drawn as well as digitally drawn posters. As World Space Week-2021 was commemorated in honor of the work done by “Women in Space”, the topics given to participants of grades 9 to 12 were “Inspiring Women in Space” and “Space debris and its consequences”.

Prize winner of Poster Presentation



2. WEBINAR

Webinar on the topic "Need for Nuclear Energy" in YouTube link - <https://youtu.be/Vq8uj5C1ch0>, on 28th October, 2021, Dr. R. Venkatesan , HEAD RESD, Mrs. Jalaja Madan Mohan , Head, TCPAS & M. Ramu, Sr. Scientific Assistant, IGCAR, were the speakers. Five Hundred and One students registered for the webinar through online



Webinar on the topic "Need for Nuclear Energy" in YouTube link - Delivered on 28th October, 2021, Dr. R. Venkatesan , HEAD RESD, IGCAR, Kalpakkam.

3. ONLINE WEBINAR

An online webinar was organized by the Club on 23rd December 2021 on the topic “Connecting our understanding of Stars and Galaxies– New vistas in Astronomy – A telescopic view”. The guest speaker Dr. Mr. ChrisphinKarthick, a renowned Astrophysicist and Public Outreach Chair from the Indian Institute ofAstrophysics(IIA), Bangalore, Karnataka. 75 students were benefited.



Online webinar on “Connecting our understanding of Stars and Galaxies– New vistas in Astronomy – A telescopic view” by guest speaker Dr. Mr. ChrisphinKarthick, Astrophysicist and Public Outreach Chair from the Indian Institute of Astrophysics(IIA), Bangalore, Karnataka

4. RIPPLES

Dr. SudakarChandran, Professor, Multifunctional Laboratory, Department of Physics, Indian Institute of Technology - Madras (IIT-M), delivered the Inaugural Address on 'Touring on Nanoworld'. It was followed by an interactive session with the students. The report of the 8th edition of the Annual Science Newsletter - WAVES 2022 was given by HansikaVardhini N, Editor, Waves 2022. The results of both the interdepartmental and intercollegiate fest events were announced by Aditi Balaji, Joint Association Secretary. Interdepartmental and Intercollegiate events conducted during our association were held in the online mode on the 2nd and 3rd of January, 2022. Events include Sci-Fi Writng, Photography, Meme Creation, Pot-Pourri and Quiz competitions. A total of 12 departments (5 from Aided and 7 from Self-Supporting) and 11 colleges participated in the events altogether. The Overall intercollegiate runner up was awarded to Women's Christian College and the Overall trophy was won by Loyola College (Shift 2).

- No of Students Registered: 150
- No of Students Attended: 100

What are Nanomaterials?

- Nanomaterials can be defined as materials possessing, at minimum, one external dimension measuring 1-100nm.
- Nanomaterials occur naturally
- Can be produced purposefully through engineering to perform a specialized function.

NMs classification based on dimensionality

0D	1D	2D	3D
Nanospheres, clusters	Nanowires, tubes, rods	Thin films, plates, layered structures	Bulk NMs, polycrystals
 Quantum dots	 Silicon nanowire, Carbon nanotube	 Carbon nanotube	 Carbon nanotube
 Fullerene	 Carbon nanotube, Metallic nanowire	 Graphene sheet	 Polymer chain
 Au Gold nanoparticles	 Gold nanowire, Polymer nanowire, Self-assembled nanowire	 Layered nanomaterial	 Diamond

➤ These materials have different physical and chemical properties to their bulk-form counterparts.

Ripples 2021, Ethiraj College for Women

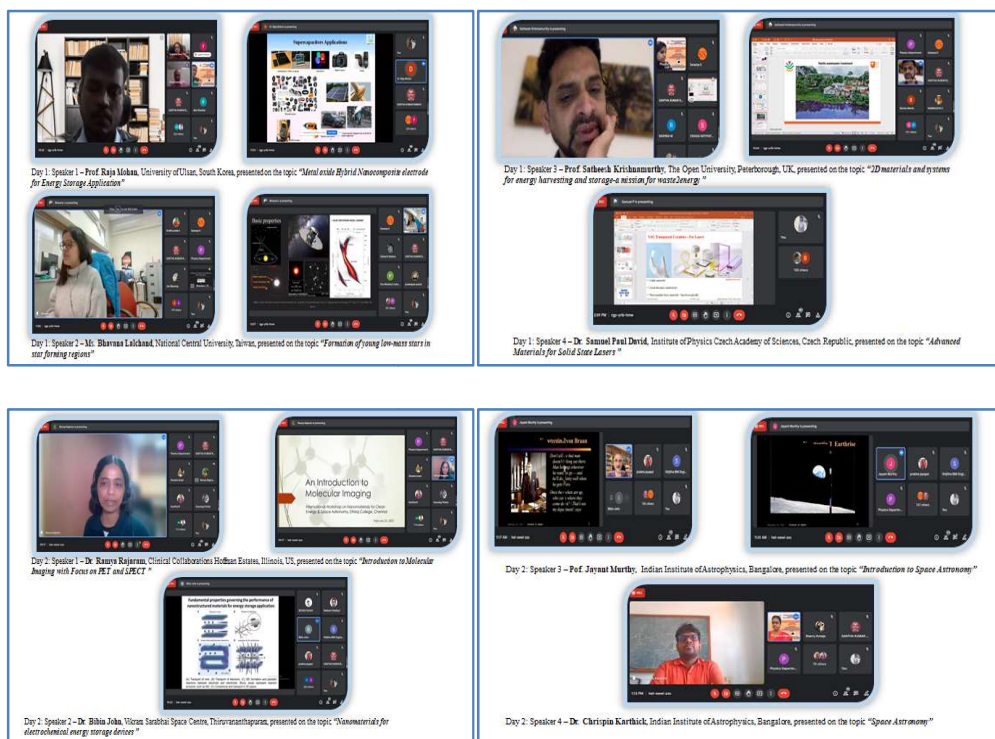
Dr. Sudakar Chandran

**Dr. SudakarChandran, Professor, Multifunctional Laboratory, I.I.T. Madras, Chief guest,
Online Inaugural Address on “Touring the Nanoworld” in Google Meet
on 5th January 2022.**

5. ONLINE INTERNATIONAL WORKSHOP

Two Day Online International Workshop on 22nd& 23rd February, 2022 on “Nanomaterials for Clean Energy & Space Astronomy”, Day 1 started with the plenary talk by Prof. Raja Mohan, Research Professor, University of Ulsan, South Korea on Metal oxide Hybride Nanocomposite electrode for Energy Storage Application, followed by Ms. Bhavana Rangwani National Central University, Taiwan started the afternoon session with her title “Formation of young low-mass stars in star forming regions” continued with the plenary talk on “ 2D materials and systems for energy harvesting and storage - a mission for waste2energy”, by Prof. Satheesh Krishnamurthy, Chair of Energy Technology, School of Engineering & Innovation, The Open University, Peterborough, UK, the final session was handled by Dr. Samuel Paul David, Senior Researcher, HiLASE Centre, Institute of Physics of the Czech Academy of Sciences, Czech Republic on “ Advanced Materials for Solid State Lasers”.

Day 2 initialized with invited talk of Dr. Ramya Rajaraman, Research Professional, Clinical Collaborations Hoffman Estates, Illinois, United States on “Introduction to Molecular Imaging With Focus on PET and SPECT” followed by Dr. Bibin John, Scientist, Energy Systems Development Division, Vikram Sarabhai Space Center, Thiruvananthapuram, speech on "Nanomaterials for electrochemical energy storage devices" continued with the plenary talk on “Introduction To Space Astronomy” by Prof. Jayant Murthy, Senior Professor, Indian Institute of Astrophysics, Bengaluru and the workshop ended with the invited talk on “Space Astronomy” by Dr. Chrispin Karthick, Scientist Indian Institutes of Astrophysics (IIA), Bengaluru, India.1

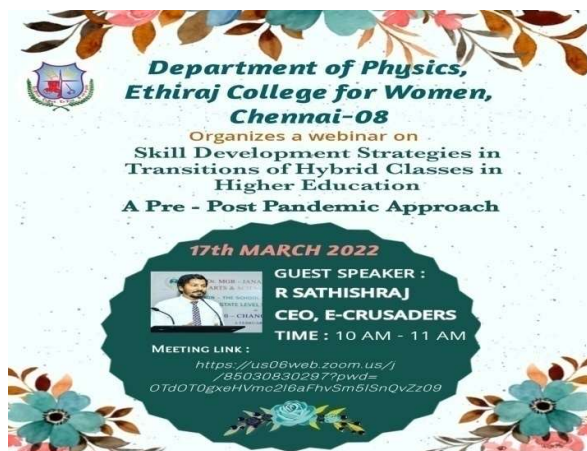


Invited Speakers for the Two Day Online International Workshop on 22nd & 23rd February, 2022 on “Nanomaterials for Clean Energy & Space Astronomy”

6. MOTIVATIONAL TALK

Mr. Sathish Raj, CEO, E-Crusaders, Motivational Speaker, Webinar on “Skill Development Strategies in Transitions of Hybrid Classes in Higher Educational – Pre – Post Pandemic Approach on 17th March 2022.

- No of Students Attended: 110



Invitation of Motivational Talk by Mr. R. Sathish Raj, CEO, E-Crusaders

7. FIELD TRIP

A field trip to B.M Planetarium was organized by the Club on 18th March 2022. 99 students from the UG and PG classes of the Physics department along with 4 staff of Ethiraj College for Women were taken on a field trip.



A field trip to B.M Planetarium was organized by the Club on 18th March 2022.

8. INAUGURATION OF THE ASTRONOMICAL TELESCOPE AND NIGHT SKY WATCH

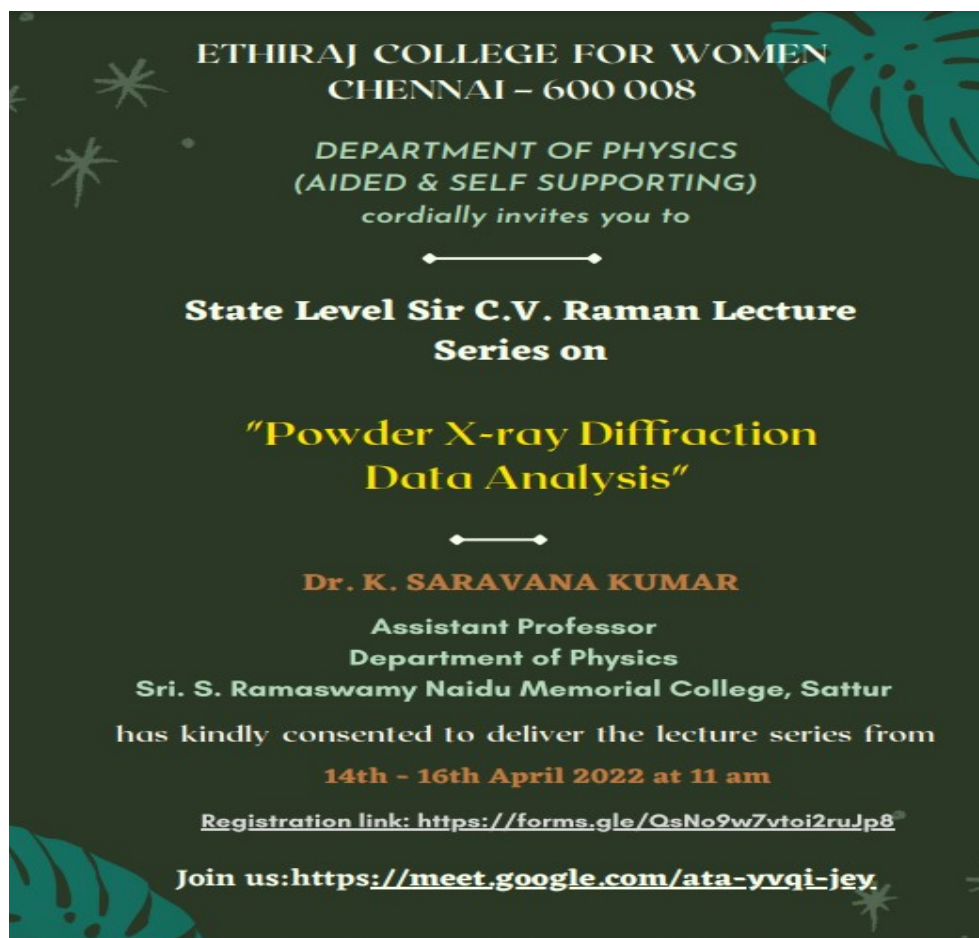
The greatest event of the Club was the inauguration of the Astronomical Telescope. The inaugural ceremony was held on 12th April 2022. The evening was delighted with the inauguration and a night sky watching program. The inaugural was graced by chief guest Dr. Thiru. S. Soundarajaperumal, Director, Tamilnadu Science and Technology Center, Chennai. Felicitations rendered by Madam Chairperson, Dr. Thiru, M.Sekar, Principal and Vice Principal.



**Inauguration of the Astronomical Telescope on 12th April 2022 with a night sky watch -
Dr.Thiru. S. Soundarajaperumal, Director, Tamilnadu Science and Technology Center,
Chennai.**

9. Sir C.V. RAMAN LECTURE SERIES

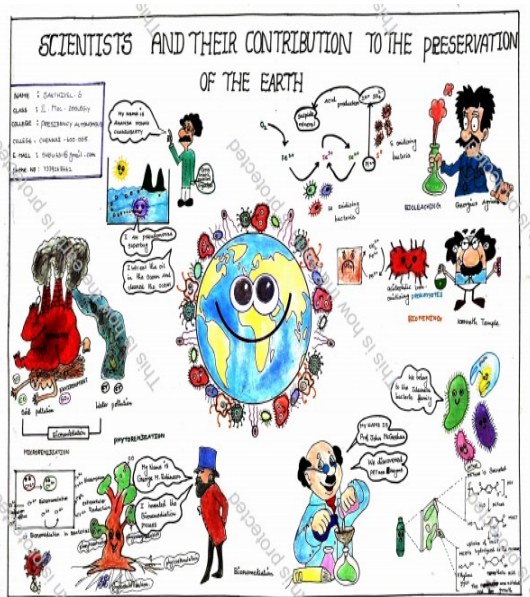
Dr. K. Saravana Kumar M.Sc., Ph.D., Assistant Professor, Department of Physics, Sri. S. Ramasamy Naidu Memorial College, Sattur. Speaker, Sir C.V. Raman lecture series on "Powder X-ray Diffraction Data Analysis" on 14th to 16th April 2022. Around 163 students were benefited out of it.



Invite of Sir C. V. Raman Lecture Series

10. CARICATURE AND ESSAY WRITING COMPETITION

Caricature and Essay Writing competition were organized for college and school students in commemoration of Earth Day 2022 on 22nd April 2022. Around 20 school students participated in the Essay Writing competition and 31 college students participated in Caricature competition. The Prize winners were given certificates. E- Certificates were issued to the participants.



Invite and Prize Winner of Caricature Competition



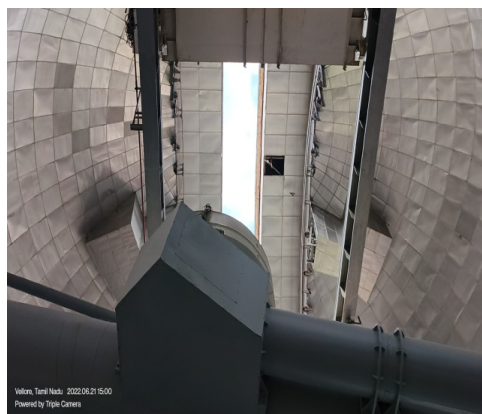
Invite of Essay Competition

11. INDUSTRIAL VISIT TO VAINU BAPPO OBSERVATORY, KAVALUR

The 34 final year UG students of the Department of Physics along with the Faculties Dr. B. Uma and Dr. M. Amudha were taken on an Industrial Visit to VainuBappu Observatory, Kavalur on 21st June 2022



Explanation about the functioning of the Telescope by Mr. Velu



Optical Telescope – 90" Industrial Visit to VainuBappu Observatory

2022-2023

1. Extension Activity

As a part of the Extension activity, The Department of Physics in collaboration with the Community Service Scheme (CSS) Club conducted Practical sessions for five days from 25th July 2022 to 29th July 2022.



Dhanakoti Middle school Student receiving certificate at the end of Practical Session

2. Night Sky Watching Session

The Department of Physics had organised a Night sky watching session on 17th of August 2022. This motivated the students to enjoy the sky observation through CelestronNexStar Telescope. The event was a huge success as more than 250 participants attended and gained enhanced knowledge with regard to the stars and the planets.



Night sky watching session

3. STAR PARTY

The Astronomy Club of Ethiraj College for Women from department of physics had organised a **STAR PARTY 2023** for aspiring students, professors and general public who are curious about the sky, on 09th January, 2023.



**ANight Sky Watching Session along with our beloved Chairman and Principal in- charge
on9thJanuary 2023.**

4. FIELD TRIP

A field trip to Madras Atomic Power Station, Kalpakkam, Chennai was organized by the Club on 17th February 2023.

96 students from the UG and PG classes of the Physics department along with 3 staff of Ethiraj College for Women were taken on a field trip.



A field trip to MAPS, Kalpakkam was organized by the Club on 17th February 2023.