



**UNIVERSITY OF KERALA**  
**KARIYAVATTOM CAMPUS**  
**DEPARTMENT OF PHYSICS**

**NATIONAL SCIENCE DAY CELEBRATION 2022**

***“Integrated Approach in Science and Technology for Sustainable  
Future”***

**MIRATIO SCIENTIA**

**24<sup>th</sup>, 25<sup>th</sup> & 28<sup>th</sup> February 2022**

**PROGRAMME REPORT**



UNIVERSITY OF KERALA



DEPARTMENT OF PHYSICS

Presents

# National Science Day Celebration 2022

24, 25, 28 February 2022



## MIRATIO SCIENTIA

LET'S EXPLORE THE WONDERS OF SCIENCE

**Events :** Invited talk by Dr Bindusar Sahoo, IISER TVM  
Quiz competition  
Debate competition  
Science Exhibition  
and many more

**Contact:** Hanna - 9037840231  
Akash - 9895908692





## PROGRAM SCHEDULE

# Miratio scientia

Let's explore the wonders of science

24

### Interactive talks

09: 30 am :

#### RECENT ADVANCES IN RAMAN SPECTROSCOPY

Dr Hubert Joe

Associate Professor

Department Of Physics, University Of Kerala

11: 00 am :

#### STORY OF FUNDAMENTAL FOURS

Dr Bindusar Sahoo

Associate Professor

School Of Physics, IISER Thiruvananthapuram

02: 00 pm :

#### THE EARTH

Dr Aswathy R P

Assistant Professor on contract,

Department Of Physics, University Of Kerala

Venue : CLIF SEMINAR HALL, KARIAVATTOM CAMPUS, UNIVERSITY OF KERALA

25

09: 30 am :

#### BLACK HOLE

(Exhibition,

Games, Puzzles, Science tree, Modelling)

11: 00 am :

#### CLUEMINATI

(Treasure hunt)

06: 30 pm :

#### FILM SHOW

(Science Fiction)

Venue : ONV OPEN AIR AUDITORIUM, DEPARTMENT OF LINGUISTICS,  
KARIAVATTOM CAMPUS, UNIVERSITY OF KERALA

Venue : DEPARTMENT OF PHYSICS, KARIAVATTOM CAMPUS, UNIVERSITY OF KERALA

28

09: 30 am :

#### QUIZ

12: 30 pm :

#### TALKYON

(Debate)

01: 00 pm :

#### D'SCIENCE

(Online Poster competi-  
on and troll competition results declaration)

06: 30 pm : Observatory visit

Dept. Of Physics, UoK

## **“Integrated Approach in Science and Technology for Sustainable Future”**

National science day is celebrated in India on February 28 every year. The day is celebrated to commemorate the discovery of the ‘Raman Effect’ by the great Indian physicist Sir C V Raman on February 28, 1928. He was awarded the Nobel Prize in Physics in 1930 for the same. This year, the theme of the National Science Day is *“Integrated Approach in Science and Technology for Sustainable Future”*.

Department of Physics had organised 3 days programme on 24<sup>th</sup>, 25<sup>th</sup> and 28<sup>th</sup> of February 2022 which encouraged the students to anticipate their interest in science to the future and abide the base more strongly. It also recognized outstanding efforts in the area of science and technology and inculcating scientific temper among the masses. Talks, Exhibition, Observatory visit, Film show, Quiz, Debate, and many more contests which was solely relied on scientific supposition made every audience who was not even belonged to a science background could a part intrigued. Most of the programs was

organised intercollegiate.



## SUPER 30





One of the major segment of the programs was the delightful presence of 30 students from different colleges who participated us throughout the programme. Their appearance really made a mark on each and every occasion to another level. As a part of the affair by sending invitations to all the colleges that the first 30 students who registered could be a part of every event conducted so far. They made use of the opportunity and help us the program to become a successful event.



## DAY 1



The programme was started with the Talk by three of the esteemed personalities from the department as well as the from outside. Which emboldened the audience which included the faculty members, students and super 30 to captivate their knowledge and the interactive session made it more productive that everyone could share their perspectives which enabled us to view Science in an open-minded prospect.

The first talk was handled by one of the inevitable parts of the department which holds the academic integrity at its best Dr Hubert Joe sir ,associate professor took on the topic "Recent Advancements in Raman Spectroscopy" ,



which enabled the audience to understand the changes from the past to the current situation and the changes it could bring about. The talk last about one and a half hour from 10.00 to 11.30.

The second session was handled by our invited guest from one of the well-established institutions in Kerala Dr Bindusar Sahoo Associate Professor (Physics) Indian Institute of Science Education and Research, Thiruvananthapuram. Made an interactive talk on the topic “The fundamental fours”.





The talk was really inspiring throughout to think and process about the nature and the outer space. Students participated that talk by raising questions and finding out different possibilities about the existing suppositions.

The third session was handled by Dr Aswathy R P from department of physics took the topic “THE EARTH”. It was an interactive session in which we discussed about origin of earth, structure of earth and consequences that we might face in our future by human exploitation

## **OBSERVATORY VISIT**

Thiruvananthapuram Astronomical Observatory is a scientific and astronomical observation station established in the early 1800. This place at its peak was a symbol of the achievements and modern development was world renowned. But after all these years the observatory has been now dysfunctional. It is now used as a tourism attraction rather to do research. Equipment brought from England used in the olden days like long range telescopes, magnetic clock etc.



can be viewed there.

We a group of seventy students including super30 with department faculty's had reached there at 7pm. A documentary presentation of "HISTORY OF TRAVENCORE OBSERVATORY" and sky watch was a knowledgeable experience for us. Glittering explanation of space and stars was given by Dr.Ajesh A department faculty. After



dinner, we gathered in front of observatory discussed Observatory visit was the one of the best program of MIRATIO SCIENTIA.





## **DAY 2**

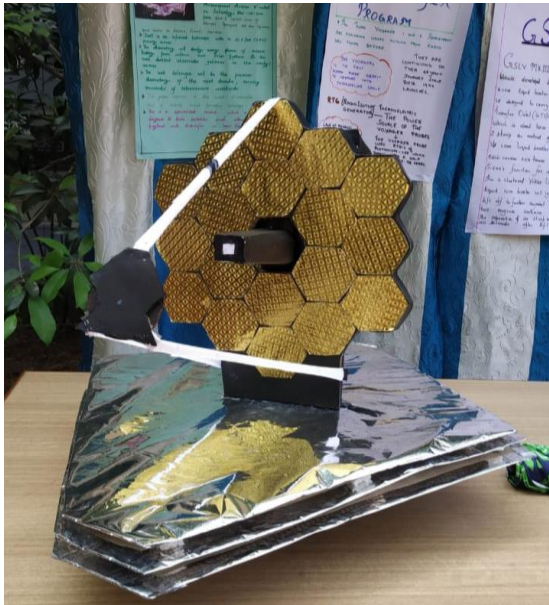
### **EXHIBITION-“BLACK HOLE”**

We conducted an exhibition named ‘Blackhole’, puzzle and games section ‘Huzzle’ and demonstrations of latest space technologies named ‘Sciverse’. The event was held in front of the department on 25 February 2022 from 9.30 am to 5pm.

The exhibition Black hole included working model of Vacuum Cleaner, Hydraulic lift and projector. Huzzle section included Various science games and puzzles such as steady hand game,



diagonal move, math wheel, mystery box etc... Demonstrations like James Webb telescope, GSLV, Sputnik were included in Sciverse.







we presented an innovating and astonishing “cosmic web” comprising of star formation, demonstration of solar system through hologram and space- time curvature, cartoon representation of friendly talk between Stephen Hawking and Penrose inside the black hole. Cosmic Web: cosmic web is the building block of the cosmos. Similarly our cosmic web was a simple and graspable visual treat for understanding mysterious world of science and space. It was those visitors with knowledgeable and thoughtful questions bagged the occasion. Out of the cosmic web demonstration the highlighted one was the journey through solar system using hologram which worked on the principle of interference.





The discussion of hawking radiation with one of our associate Professor Dr Mamta Sahoo gave more insight about mystery of black hole and the vast Universe. We enlightened all the science enthusiasts who actively Participated throughout the event from various colleges and Departments of university itself. The prizes were given to Participants who won in the games. The team members put Immense effort to make this event a grand success within a short Span of time.







## **TREASURE HUNT- “CLUEMINATI”**

We organised an inter department treasure hunt competition

“CLUEMINATI” on Friday, February 25<sup>th</sup>, 11 A.M. 14 teams registered for the competition with a registration fee of Rs.100/- per group. We started from the department of Physics and set the clues at various parts of the main campus of Kariavattom including O.N.V Memorial open air auditorium, clock tower of Engineering college, fisheries and aquatic biology department, Rossi bench, department of optoelectronics, Engineering college canteen. The last clue lead to the key which was handed to the security at the back gate. The aim was to bring the key to the department of Physics following the clues and open the treasure box with the key. After one and half hours, the team from the department of Demography including Austin Jose



Kuriakose, Alan Joshy, Sarath Babu.S, Seirrah Joseph reached the treasure box with the Key and won the competition. The prize money of Rs 3000/- was handed over by Dr. Savitha Pillai on 28th February, at the Department of Physics.

University of Kerala  
Department of Physics

*Cheminati*  
**TREASURE HUNT**  
WINNERS

CONGRATULATIONS TO

Seirrah Joseph

Austin Jose Kuriakose

Alan Joshy

Sarath Babu.S

MSc.Actuarial Science(2020-22)  
Department of Demography



**MIRATIO SCIENTIA**

## MOVIE TIME



The students of department of physics conducted the sci-fi film show at ONV Open air auditorium. The event had started at 7pm and the movie was “GRAVITY”. Students of different departments gathered at the ONV auditorium.”Gravity” is a movie absolutely original and different, and impossible to be described in words.



Healthy discussions happened after the movie presentations. The program had ended at 9.30am.

## DAY 3

### QUIZ COMPETITION-“PRAVEGA 2022”



We organized an intercollegiate quiz competition PRAVEGA 2022 , named after one of the most powerful supercomputers in India, on Monday February 28<sup>th</sup> 10 am at C V Raman hall in the Central Laboratory for Instrumentation and Facilitation(CLIF).





Seven teams were registered with a registration fee of Rs.100/- per group. The participants are supposed to be part of this as a team of two. The invitation and the promotions were sent through different social media platforms. The program was inaugurated at 10.00 am by

our Chief guest Dr Mamata Sahoo, UGC Assistant Professor at Department of Physics, who had shared about the significance of commemorating national science as remembering the great Sir C V Raman and his contributions to the world as a science person who had placed his foot as the privilege of each and every Indian citizen now and then. After inauguration, there was launching a name for this particular ceremony which is named as PRAVEGA 2022 inspired from the theme of this year's national science day. Our Quiz Master from department Dr Ajesh sir who's assistant professor proceeded the quiz.



He had begun the process by sharing the rules and regulations to the participants. The quiz consists of 3 rounds.




Aneesha A S and Vishnu Mahesh A S, Participants from University college Trivandrum bagged the first prize, the prize money of Rs 3000/- was handed over by Dr.Mamta sahuo.



The second prize worth Rs 1500/- won by Avani S A and Janvi A G, participants from University College Trivandrum, was handed over by Dr. Ajesh.

Archa B S from University College Trivandrum and Swathy S B from Mar Ivanios College Trivandrum secured the Third prize of Rs 1000/- was awarded by Dr.Aswathy.


  
University of Kerala  
Department of Physics


**INTER-COLLEGIATE QUIZ COMPETITION**

*pravega* - 2022  
IN ASSOCIATION WITH NATIONAL SCIENCE DAY

**WINNERS**


**1** Anusha A S  
Vishnu Mahesh A S  
**UNIVERSITY COLLEGE TRIVANDRUM**



  
Avani S A  
Janvi A G  
**UNIVERSITY COLLEGE TRIVANDRUM**

**2**

**3** Archa B S  
**UNIVERSITY COLLEGE TRIVANDRUM**  
Swathy S B  
**MAR IVANIOS COLLEGE TRIVANDRUM**







## DEBATE COMPETITION-“TALKYON”

UNIVERSITY OF KERALA  
DEPARTMENT OF PHYSICS  
**MIRATIO SCIENTIA**  
Presents  
*Inter college Debate Competition*  
**'TALK'YON**  
SPEED UP WITH YOUR TALK

Date: 28/02/2022    Venue: cliff    Time: 12.30

**Judging panel**

  
**Dr. Arun kumar**  
Journalist  
Assistant professor  
Kerala university

  
Sidharth M Joy  
Kairali TV  
Manyamahajanagale  
Runner up  
speak for india ,finalist

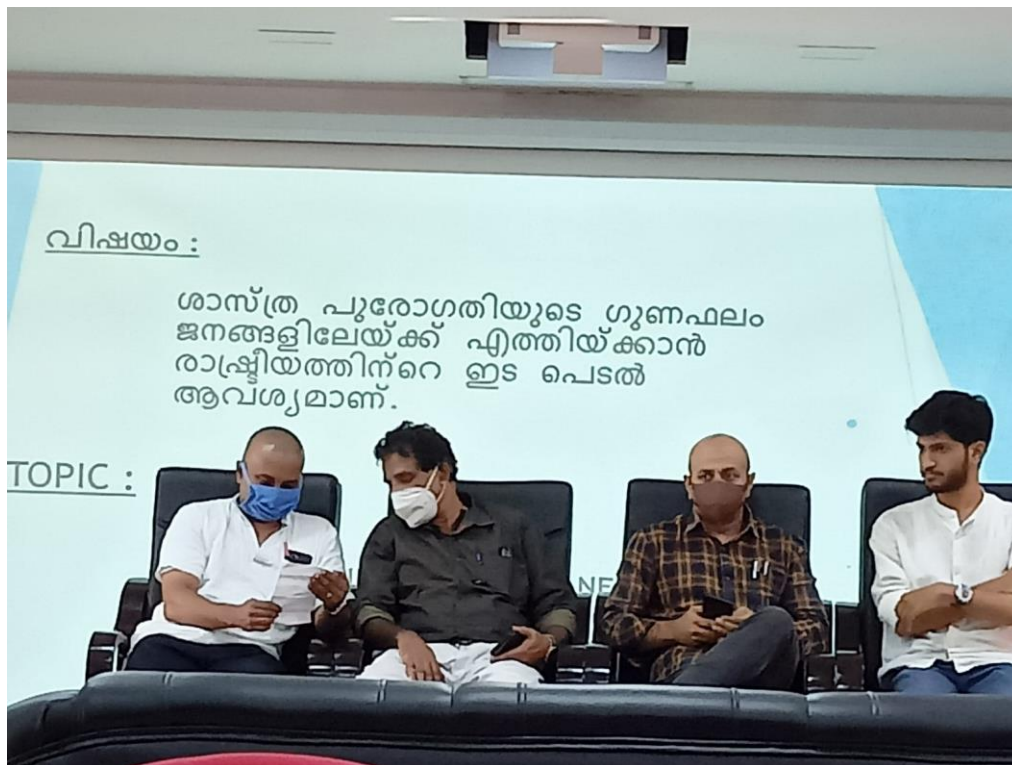
1ST PRIZE :  
5000/-  
2ND PRIZE:  
2000/-

For registration  
fill up the google form  
<https://forms.gle/cXDRZEBL9n3daE3I7>

Registration fee for a team of 2 member  
100/-  
(Cross teams are allowed)

contact: 9895708985  
9400802908

We conducted an Inter-college Debate Competition on behalf of the National Science Day Celebration on 28 February 2022 from 1.30 pm onwards. The event was held at the C V Raman Hall in the Central Laboratory for Instrumentation and Facilitation (CLIF).



Through online registration, we got nine teams from different colleges across Kerala, out of which eight teams have participated. It was conducted in two rounds. First round was judged by Sidharth M Joy, Kairali TV Manyamahajanangale Runner up and Speak for India 2016 Finalist, and the second round was judged by Dr. Arunkumar, Journalist, Assistant Professor, Kerala University along with Sidharth M Joy. Abhirami, one of our students, was the moderator of the event. The topic for the first round was ‘Science literacy alone can eradicate Superstitions’. Out of the eight teams participated, two of them (SD 05 Arjun Ajitha Somnath and Akhil D Varghese ,University College ,Thiruvananthapuram and SD 05 Adharsh H S and Rwithik M Ramesh ,University of Kerala, Kariavattom Campus) were selected for the final round. The topic for final round was ‘Political interference is necessary to make scientific/technological growth



accessible to citizens'. The team SD06 argued in favour of the topic first and team SD 05 argued against the topic after which each of the four answered the questions raised by the judging panel. After that a flip was given to the teams and the stand of arguments got interchanged which was followed by the questions from panel.



The judgement was based on whether the views and contents shared by the participants are relevant to the theme or not, the presentation or expression of thoughts, etc... Team SD 05 bagged the first position worth Rs 5000/- and team SD 06 secured the second position worth Rs 2000/-. SD 06 A Arjun was awarded the 'Best Debater' title.

The competition ended by 5.00 pm. It was an enthralling experience for the speakers as well as the audience.

 UNIVERSITY OF KERALA  
DEPARTMENT OF PHYSICS

# INTER COLLEGE DEBATE COMPETITION

## TALK'YON

CONGRATULATIONS TO WINNERS

FIRST PRIZE

 **ARJUN AJITHA SOMANATH**  
**AKHIL D VARGHESE**  
*University college*  
*,TVM*

SECOND PRIZE

 **RWITHIK M RAMESH**  
**ADARSH H S**  
2nd MA POLITICAL SCIENCE  
Department of political science

# MIRATIO SCIENTIA

NATIONAL SCIENCE DAY CELEBRATION

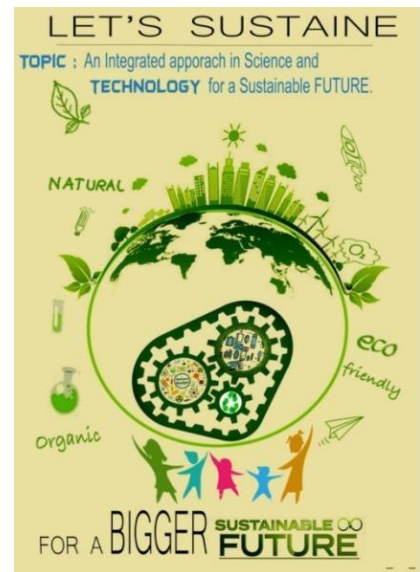
# D' SCIENCE

## POSTER COMPETITION

The Department of Physics, University of Kerala, Kariavattom Campus conducted an Inter-collegiate Online Poster Designing Competition on behalf of the National Science Day Celebration on 28 February 2022. The judgement and declaration of the result was held at the C V Raman Hall in the Central Laboratory for Instrumentation and Facilitation (CLIF) by Dr. Jayakrishnan. R, Associate Professor, Department of Physics, University of Kerala Kariavattom Campus. Through online registration, we got thirteen entries from different colleges across India. The topic for the competition was 'Integrated Approach In Science And Technology For A Sustainable Future'. Out of the thirteen entries, Srihari R S of St. Stephens College, Pathanapuram bagged the first prize and Aadarsh Nandkumar Khule of Degree College of Physical Education, Amaravati, Maharashtra and Asish George Roy of St. Gregorios college, Kottarakkara shared the second prize.








**UNIVERSITY OF KERALA**  
Department Of Physics



**D'Science Intercollegiate Poster Designing Competition Winners**


In association with the National Science Day Celebration

Miratio Scientia



**FIRST PRIZE**

**SRIHARI R S**  
St. Stephens College,  
Pathanapuram.



**SECOND PRIZE**

**AADARSH NANDKUMAR KHULE,**  
Degree College Of Physical  
Education, Amravati,  
Maharashtra.



**ASISH GEORGE ROY**  
St. Gregorios College,  
Kottarakkara.

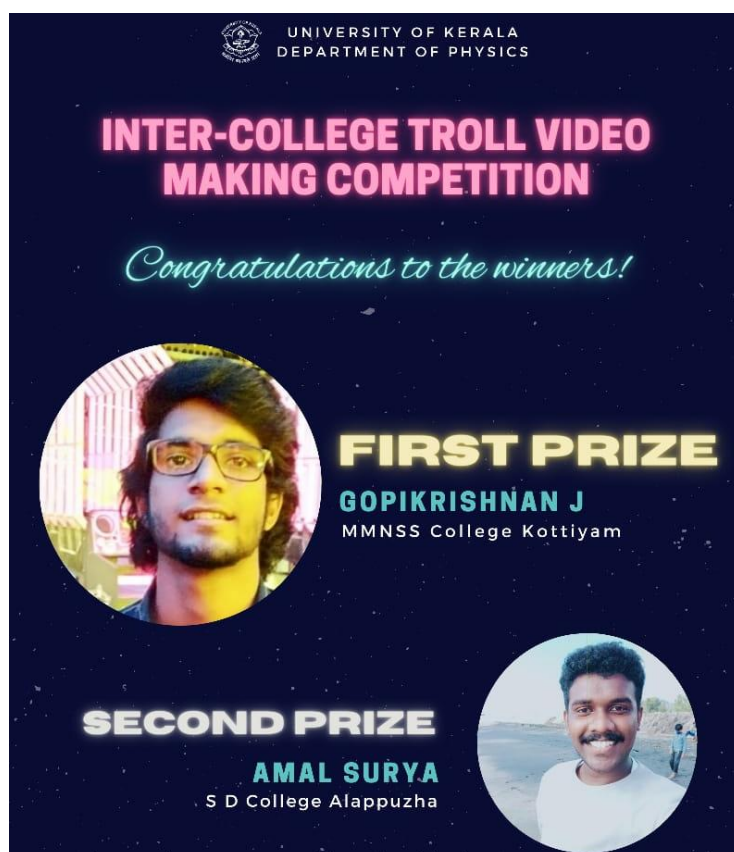


**AADARSH NANDKUMAR KHULE,**  
Degree College Of Physical  
Education, Amravati,  
Maharashtra.

Congratulations to all the Winners...

## TROLL VIDEO COMPETITION

We conducted intercollege troll video Making competition through online mode It was really a fabulous experience. In this competition there was no registration fee. The registration starts on 22 February, 2022. About 9 students from Different colleges registered for the competition. Finally, we got 6 videos about 3 minutes duration. Participants send their Videos through g mail before the final date 28 February, 2022. The winner were decided by Dr Sibi k.S , head of the department, Results were announced by Dr jayakrishnan R, Associate professor department of physics. First prize was received by Gopi Krishnan j, MMNSS College KOTTIYAM, a cash prize of 1500. The video explained the basic of Newton s laws to the complex quantum mechanics in a comic way. The second prize was received by Amal surya , SD college ALAPPUZHA he received cash prize 500. The cash prize are send via Google pay. All participants are awarded e-certificate. The main attraction of the competition is learned and laugh the fascinating Beauty of physics.



## CONCLUSION

Our department organized science day celebrations called Miratio Scientia could be pronounced successful that the participation and involvement of all the personalities chief guests, department faculty members, Super 30, students, coordinators other staffs has a contribution on their own. The aim of the event was to elaborate on the importance of science in our life.

The main focus was on this year's theme itself and all the programs were organised according to that. Students presented their wonder science experiments according to their interests and skills. Besides this, there were special activities performed by the students. All the students could be productive, especially those who want to choose science as their career.

Special Thanks to our Alumini's

Dr VP Sudeep Kumar (Asst General Manager BSNL, Kerala)

Dr. Sandhya C V (Associate Professor & Head Department of Physics Mahatma Gandhi College)

Dr. M R Sujimol, (scientist/engineer, space applications centre, Delhi earth station, new Delhi)

Dr P K Manoj, (Assistant Professor, TKM College of Arts and Science, Kollam)

S.R.Rajesh, (Deputy General Manager (Air Traffic Management)

Airports Authority of India, Trivandrum International Airport)

Dr.Krishna Priya (Scientist, ISRO)