

Glimpse of Activities

Public Lectures

Department of Physics in association with IUCAA resource centre organised Regional Conference on Astronomy, “Research Opportunities and Challenges” on 8-10 December 2014.



IUCAA Resource Centre (IRC), Kochi, a regional arm of the Inter University Centre for Astronomy and Astrophysics (IUCAA), Pune, and Nirmala College, Muvattupuzha have jointly organized a three day regional conference in astronomy from 8-10 December 2014. This forms the second in the series of

annual conferences planned for the presentation of papers by young research scholars and senior astronomers from the region. Prof. Ajit Kembhavi, Director, IUCAA delivered the inaugural speech on 'Precision measurements in Cosmology'. This was followed by an introductory speech by Prof. V.C. Kuriakose, Co-ordinator of IRC, CUSAT, Kochi on the aims and objectives of IRC. Prof. Annapurni Subramanian delivered a lecture on 'Stellar populations in nearby galaxies'. Even though the stress is on presentations by young Astronomers, there were also review lectures in various frontier areas by Senior Astronomers. Ajith Kembhavi , Director, Inter University centre for Astronomy And astrophysics (IUCAA), Pune , P.P. Divakaran, formerly of Tata Institute of Fundamental Research (TIFR), Mumbai, Ranjeev Misra, Inter University centre for Astronomy And astrophysics (IUCAA), Pune, Annapurni Subramaniam, Indian Institute of Astrophysics (IIA), Bangalore, Balamurugan Sivaraman, Physical Research Laboratory (PRL) Ahmedabad, V.C, Kuriakose, IUCAA Resource Centre,(IRC), CUSAT, Kochi, Ninan Sajeeth Philip, St. Thomas College, Kozhencherry, K. Indulekha, Mahatma Gandhi University, Kottayam, C.D. Ravikumar, University of Calicut, Kozhikode, K.P. Harikrishnan, Cochin College, Kochi, Koshy George, Indian Institute of Astrophysics (IIA), Bangalore, Anand Narayanan, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, Jagadheep D, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, L. Resmi, Indian Institute of Space Science and Technology (IIST), Thiruvananthapuram, Paul K. T, Christ College, Bangalore were the eminent people who gave review Lectures during the conference. Around 250 school students selected from various schools of Muvattupuzha educational district were also benefitted from the programme.

A Day with the Scientist – Prof. Jayant Vishnu Narlikar and Dr. Mangala .J. Narlikar delivered a talk on 9th February 2016



For promoting scientific temper and igniting young minds, “A Day with Scientist” programme was conducted by the Department of Physics on 9th February 2016, in association with IUCAA research centre, Cochi. In this programme, Prof. Jayant.V.Narlikar delivered a talk on “Are we alone in the Universe hosting life?”. Here, he described different experiments initiated by him, in support of ISRO, for the search of life. In this session, Dr. Mangala J. Narlikar delivered a talk on “Mathematics through puzzles”. She described examples of how certain puzzles have led to the use of mathematics and the creation of a new branch of

Mathematics. Around 250 school students selected from various schools of Muvattupuzha educational district were also benefitted from the programme.

Seminars

Invited talk on *Application of Physics in current day medicine* by Dr. Thomas Joseph (MS, FRCS), North Cumbria University Hospitals, UK on 3rd August 2015



Invited talk on Gravitational Waves - Dr. C.S. Unnikrishnan TIFR, Mumbai delivered a talk on *"The new waves in Physics, Technology, and Astronomy"* on 30th December 2015.



Invited talk on cryptography and internet security by Prof. Gigi Joseph, Senior Scientist (Grade H), BARC, Mumbai on 9-12-2016



Invited Talk on Color and Visual Imaging by Dr. Sony George, The Norwegian Colour and Visual Computing Laboratory, Department of Computer Science, Norwegian University of Science and Technology (NTNU), Norway on 10-07-2017.



Invited talk on “Recent Trends in Information Technology” by V. K. Adarsh, Writer, Columnist, IT Specialist on 4-01- 2017.



Invited talk on “Quantum Chaos” by Dr. Sijo K Joseph, Post-doctoral fellow, Tel-Aviv University, Israel on 20-07-2017.



Awareness Programme: conservation of energy and preservation of the environment

Department of Physics organised an awareness programme among the students and public about conservation of energy and preservation of the environment.

- 1) Lecture by Dr. Suraj Soman, DST Inspire Faculty, CSIR-NIST, Trivandrum on “A journey through the evolution of solar cells” on 27-02-17, as a part of Sunny Joseph Memorial Lecture.**



2) Energy Auditing

Twenty nine students from B.Sc. Physics Model 1 participated in the energy auditing of the campus under the leadership of Dr. George James T , Associate Professor and Head, Department of Physics.



3) Energy conservation: An awareness programme was organised by Department of Physics on 7th August 2015.

Department of Physics conducted a workshop on green energy in which students are given training on assembly of LED lamps. The awareness programme was also extended to public.





4) Ozone Day Celebration– Seminar on energy conservation sponsored by Kerala State Council for Science Technology and Environment

As part of the the ozone day celebrations at Nirmala College Muvattupuzha, Sri. C R Neelakandan, environmentalist and social activist (Former Deputy General Manager of Keltron) delivered a talk entitled “Nature and Sustainable Development” on September 2017.

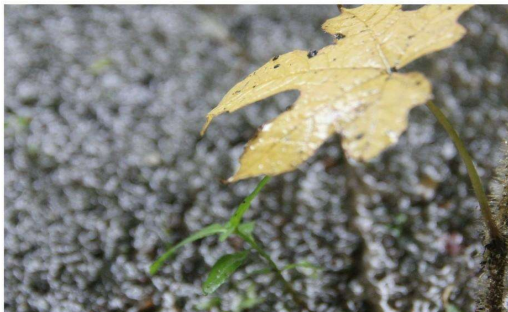
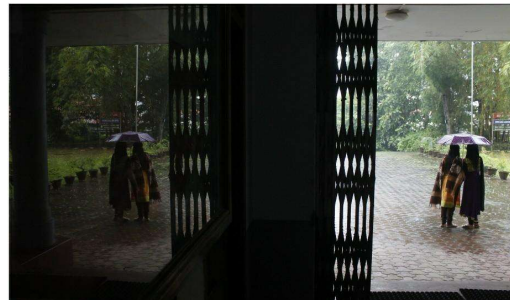


6. Inter Departmental debate competition on “energy conservation – a hindrance to development or not?” on 27-09- 2017.



7. Photography Competition on “Nature & Me”

Department conducted a photography competition on 27th September 2017 with an aim to involve students for the preservation of the environment.



Student Solar Ambassador Workshop 2019

The Department of Physics joining hands with IIT Bombay has conducted Gandhi Solar Yatra on October 2, 2019. The program is to encourage and promote the community to use solar energy. For this event, faculty members of the Department attended an online course and got trained. The trained teachers gave hands on training to the students in the Department. In addition to

students from the Department of physics, students from other Departments and nearby schools also attended the training programme.



Association Inauguration 'Qbit 2K19- 20'

The activities of Physics Association Q'bit 2K19-20' is inaugurated on 11th day of July 2019 by Dr. Girinath G. Pillai, Director, ZastralInnovations, Bengaluru. He also delivered a talk on quantum computing.



Sunny Joseph Memorial Lecture Series

Sunny Joseph memorial lecture 2015

Dr. Manoth Mathew, Scientist, Advanced Submarine Sonar Programme, NPOL, DRDO, Kochi delivered a talk on “Overview of Nanomaterials and Nanotechnology” on 5-2-2015. M. C. Dileepkumar, Vice Chancellor, Sanskrit University, Kalady inaugurated the event.



Sunny Joseph memorial lecture 2016

Dr. P.A. Hassan, Chemistry Section, BARC, Mumbai delivered a talk on “Exploring nanostructures using electromagnetic radiation” on 25-2-2016.



Sunny Joseph memorial lecture 2017

Dr. SurajSoman, DST Inspire Faculty, CSIR-NIST, Trivandrum delivered a talk on “A journey through the evolution of solar cells” on 27-02-17.



Sunny Joseph memorial lecture 2018

Dr. K.P. Vijayakumar, Emeritus Professor, Cochin University of Science and Technology delivered a talk on economic and environment-friendly solar cells on 5-07-2018.



MOU with Baselius College

An MOU has been signed between Department of Physics, Nirmala College, Muvattupuzha and Department of Physics, Baselius College, Kottayam to enhance the academic quality of students, and to increase their potentials and skills by mutual cooperation.

Add on program on Robotics and Automation

Add on Program on Robotics and Automation was organised by the Department of Physics, in association with DCS Robotics, Ernakulam. Through this programme students got hands on training on robotics and Automation.

The training commenced on 31st of August 2019. Mr. Titu Thomas and Ms. Anjaly Jose were the organisers of the programme. Mrs. Sreedevi and Mrs. Nebi from DSC Robotics trained the students. Twenty students have enrolled in the program and they got acquainted with the functioning of devices like traffic light, LDR, Street light, Potentiometer, Fire Alarm, Voting machine, LED, LCD, Robot, Sonar, Soil moistures, Visitor counter, IR controller , Bluetooth module and RF Transmitter. The examination was conducted on 8th of February 2020.



Consultancy

1. Researchers from Hyderabad visited Nano Science Research Centre (NSRC)

Researchers from Hyderabad (MGNIRSA, JNTU Hyderabad) visited NSRC to study the synthesis of nanomaterials and various characterization techniques on 5th August 2015. Prof. Dr. Brahmajirao, senior professor of Nanoscience and Technology, School of Biotechnology, MGNIRSA also accompanied the four research scholars.



2. Project Facility for M Sc students

Seventy four students of various colleges successfully completed their MSc (Physics, Chemistry) projects in the Nano Science Research Centre.

Best Practices

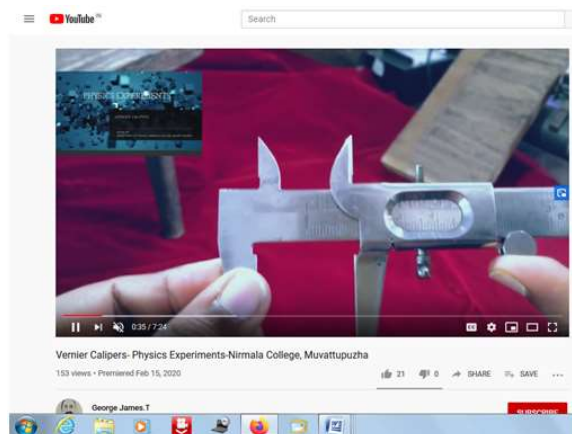
Online Resources

The video classes of the faculty members of the Department is made available online through the link https://youtube.be/L_ehs5yWjuA



A screenshot of the video lecture by Dr Aloysius Sabu N

The students of the Department took an initiatives to make demonstration videos of laboratory experiments. The videos are made available through the link <https://youtube.be/DElvPksR5hQ>.



A screenshot from the laboratory experiments demonstrated by the students.

Alumni Lecture Series

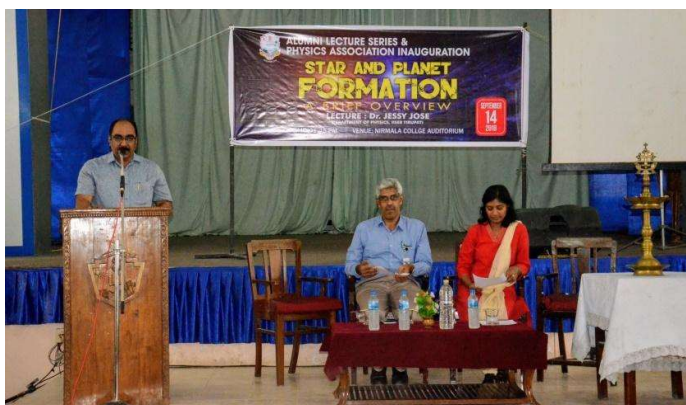
1. Mr. Sarath Raman Nair, Research Scientist, Macquarie University, Sydney delivered a talk on "Second Quantum revolution and quantum engineering" on January 16, 2020.



2. Dr. Bijoy Vengasseril Thampi, Research Scientist, Science Systems and Applications, Inc. Hampton, Virginia, USA delivered a lecture on "Machine Learning: An Artificial Intelligence Perspective" on Friday, 1 November 2019.



3. Dr. Jessy Jose, IISER Tirupati delivered a talk on Star and Planet Formation on 14-09-2018.



3. Dr. Bobby Jose, Student, University of Mumbai delivered a talk on “Higher Education Prospects and Career Opportunities in Physics” on 3 -08-2016.



Old-age home visit



As a part of value education, the students of the third year B.Sc. Physics visited old age home at Bezlehem, Vazhakkulam, Thodupuzha and spent time with them. The residents of the home enjoyed the visit and appreciated the cultural programmes and gifts.



Orphanage visit

A team of 35 students and 3 faculty members from Department of Physics visited Snehabhavan orphanage, Paynkulam, on 8th September 2019.



Swatchatha Mission Visit

The Department of Physics has participated actively in the Swatchatha Mission visit.



Student Achievements

Ms. Pranatha M. Prabhakar has won the First Rank in B. Sc. Physics Model II examination in the year 2019.



Arts

1. Ben Johnson and Gissmol Saji of IV semester Model 1 Physics won the 2nd prize in Freestyle Dance Competition held at St. Peter's College, Kolenchery.



2. Gissmol Saji of IV semester Model 1 Physics won the 3rd prize in Group Dance Competition held at Assumption College, Changanassery.

3. Theertha Prakash won second prize in Thiruvathira and A grade in Bharathanatyam at the MG university Kalolsavam.



Sports

1. Jibin Chacko and Emmanuel Jose IV semester Model 1 Physics won the 3rd prize in Intercollege Handball held at BAM College, Thuruthikkad, Pathanamthitta.
2. Aswin Thampi VI semester Model 1 Physics won the 1st prize in Intercollege 3's Football.
3. Sharbil Alakkal and Thomas Varghese of the Department of Physics won the 1st prize in Intercollege Football Competition held at Maharajas College, Ernakulam.
4. Aadhil Jabbar of VI semester Model 1 Physics won the Reliance National championship held in Mumbai.
5. Aadhil Jabbar of VI semester Model 1 Physics won the MG University Inter College football championship.
6. Aadhil Jabbar of VI semester Model 1 Physics won the third prize in the state level football held at Idukki district.



APT talent Search Examination

Three students of the Department of Physics has qualified APT preliminary examination and selected for the Interview.

1. Nithin Babu
2. Gayathri Jayan
3. Krishnachandran P

Quiz competition

A team of Krishna Chandran P and Nasrin of first year B.Sc. Physics secured first and second prize in the quiz competitions conducted by EBSB Club and Women Development Cell respectively.

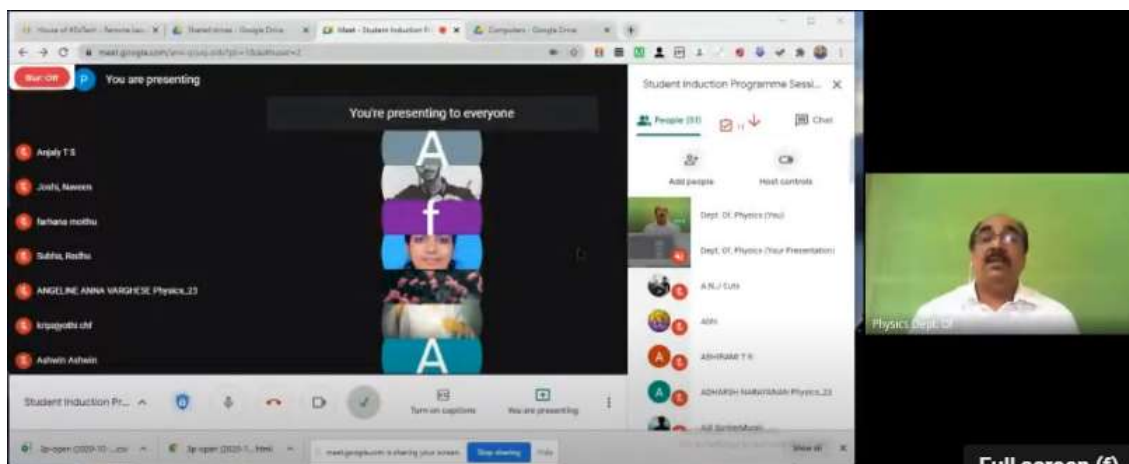


A+ holders of 2016-19 batch Model I and Model II Physics



Induction programme for first semester students

A two-day induction program for newly admitted first-year students was organised at the Department of Physics on 28 and 30 October, 2020. The purpose of the induction program was to help students adjust and feel comfortable in the new environment, inculcate in them the ethos and culture of the institution, help them build bonds with other students and faculty members, and expose them to a sense of larger purpose and self-exploration.



Screenshots from day 1 and day 2 of student induction programme